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MANAGEMENT

BY

OBJECTIVES

A Research Report

by

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June, 1957

Issued by

LOGISTICS EDUCATION AND RESEARCH PROJECT  
Air Force Institute of Technology  
Air University  
Wright-Patterson Air Force Base, Ohio

In coordination with

THE OHIO STATE UNIVERSITY RESEARCH FOUNDATION  
Columbus 10, Ohio

NOV 11 1959



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## INTRODUCTION

The purpose of this report is to present the results of an investigation into the use of objectives in the management of Air Force operations. In order to manage its many and highly diversified activities, top management of the Air Force must delegate decision making powers to the lowest organizational unit possessing the ability to make the right decision. The sheer magnitude of the number of such decisions to be made makes this management philosophy mandatory. In order to make sound decisions, persons using these powers must know at all times where the Air Force is going and how their decisions affect not only the future course of their own organization but that of other organizations as well. The ability to operate effectively and efficiently under a decentralized management philosophy will vary directly with the ability to define specific goals or objectives for each organizational element. The probability of making sound decisions would appear to increase in direct proportion to the correct understanding of these objectives at any level in an organization.

Literature in the management science field stresses the importance of objectives and the need for adequate knowledge and understanding of them at all levels of the organization. In discussing "the principle of the objective" L. Urwick (1) states that:

"There must be an objective. That sounds obvious. But if undertakings are analyzed in detail it is quite extraordinary how many undertakings and parts of undertakings are discovered which are just going along by their own momentum with only the vaguest and most hazy idea of where they are trying to go or why." (p. 26)

Holden, Fish, and Smith (2) state that:

"There is nothing about an organization more important than its future. Owners, management and employees and society in general are, or should be, more concerned about where a company is going than where it has been. In any institution the responsibility for visualizing, initiating, and achieving future objectives rests with its top management." (p. 4)

It can be assumed that every logical person has an objective which coincides with the effort (or lack of it) he exerts. Whether or not he can "define" his objective will depend on many factors: his intelligence, his philosophy of life, the abstractness or concreteness of his objective and many other variables. His objective may be to "get along and do the best I can" or to "do as little as I can". Nevertheless, it may be

assumed that he does have an objective and that his efforts are indicative of the direction which he wishes or does not wish to go.

When the person is considered as part of an organized effort, however, the picture changes. His personal objectives may bear no relationship to the objective of the organized effort. It is highly probable that his contribution to the organized effort is, to him, a means to an end and he will contribute so long as his personal objectives are served. The personal objective of the individual is related to the objective of the organization only as the attainment of the component objective assigned to the individual as part of an organization permits him or provides him with a means to an end whereby his personal objective is attained.

The personal contribution of groups of individuals in an organized effort must stem from the need for their contribution in attaining the objective of the organization as a whole. In the management of organized efforts there must, therefore, be some method or system by which individual organizational elements are given their proper place and purpose in the total endeavor. This place and purpose must be continuously revised as the total objective of the organization varies. This report presents the results of a study which was designed to develop a concept of how this should be done and to determine the degree to which the Air Force applies this concept in the management of its operations.

Given this assignment, the research group developed and presents herein a theory of how objectives should be utilized in the management of organized efforts. Much of the thinking behind this theory has been extracted from the works of professionals in the field of scientific management. The primary task of the group was to organize and correlate much of this thinking and to evolve a model system which utilized objectives for management purposes. Having developed the model, the group then undertook to develop a questionnaire which was designed to determine the degree to which Air Force organizations actually utilize objectives in the management of AF operations. The results of this questionnaire and the findings, recommendations and conclusions of the group are included in this report. To the maximum extent possible the raw data extracted from the questionnaires are included so that readers may judge their individual opinions on this matter in relation to the opinions of those who answered the questionnaire.

In evaluating the theory developed by the research group, the reader should consider each concept in the light of its usefulness to him. There is much more to be done before the



theory can be considered a firm basis for action. Concepts are worthwhile only to the degree that they are useful in helping to understand a particular phenomenon. The research group is hopeful that the concepts presented herein are useful to those who agree and will stimulate the development of other useful concepts by those who disagree.

In judging the conclusions and recommendations of the report the reader should bear in mind the limitations imposed by the nature and purpose of the project. The total time limit for the entire project was approximately three months. This limited both the scope and method employed since a completed report was desired at the end of this time. Attention is invited to the fact that the methodology was actually experimental from the point of view of the student group. The reader is cautioned that the problem was not subjected to a tried and proven research technique and the results should be judged accordingly. The group recognizes that the sample of the population to whom the questionnaire was distributed was extremely limited.

The research group wishes to convey its appreciation to the staff and advisers of the Advanced Logistics Course and to those who contributed as lecturers and advisers during the academic phase of the course. A particular debt is acknowledged to Dr. R. C. Davis of the Ohio State University. Many of the ideas herein are extracted or generated from the study of his concepts as outlined in his book, The Fundamentals of Top Management. (3) A special word of thanks is also paid to Lt Colonel J. D. Walsh of the USAF and Mr. W. A. Beckdahl of the Ohio State University Research Foundation for their patience in listening to the ideas (both good and bad) of the research group. A special word of appreciation is due to those who make the Advanced Logistics Course possible.

The group is hopeful that this report will stimulate thinking within the Air Force on the use of objectives as a management tool, and that the effectiveness and efficiency of management of Air Force operations will be increased thereby.

## SUMMARY

The literature of management science is replete with statements as to the nature and importance of objectives. The problem of how to use objectives in the management of organized efforts appears to elude even those who devote considerable attention to definition of its nature and the stature of its importance. The efforts of the research group were directed first toward the development of a concept of how objectives should be used in managing organized efforts. Secondly, the research group attempted to determine the degree to which organizations in the Air Force manage and are being managed in conformance with this theoretical concept and the belief of these organizations in regard to the importance of "management by objectives".

In the development of a concept of how objectives should be used in the management of organized efforts, the research group concluded the following:

(1) In any organized effort there exist two fundamental objectives, that of providing a service or value to meet a desire or requirement, and that of maintaining the existence of the organization over the time span the service or value must be provided.

(2) An organization is effective to the degree that objectives are attained, i.e., it provides a needed value or service and maintains itself over the time span the value or service is required.

(3) Each of the component objectives necessary to the attainment of the total objective must be assigned to one of the elements of the organization.

(4) Parent organizational elements must provide their subordinate organizations with specific missions and must assign specific objectives (objectives specified in terms of quantity, quality, and time) to these organizations.

(5) Subordinate organizations must use specific objectives to determine the resources necessary to the attainment of the specified objectives and to manage their operations.

(6) Definition of objectives should be included as an important management function in addition to the normal management functions of planning, organizing, directing, coordinating and controlling.

In determining the degree to which Air Force management practices coincide with the concepts of the research group, the group developed and submitted a questionnaire to 944 Air Force organizations. The questionnaire was submitted to the division level at both the headquarters organization and the field activities of seven major commands within the continental limits of the United States.

Analysis of the answers to the questionnaire, as shown in Figure I, indicates that only 9.5% of these activities are managed in strict conformance with the criteria established by the group (Category A organizations). This criterion demanded that the organizations have written statements of missions and specific objectives given to them by higher authority and that they must use these specific objectives to compute resources requirements. When the criterion was relaxed to permit development of missions and specific objectives by the respondent organizations with the approval of their parent organizations, an additional 21.8% of the total (Category B organizations) qualified. Finally, when the criterion was relaxed to permit specific objectives to be developed by the organization from various sources such as letters, manuals, program documents, etc., another 49.8% (Category C organizations) of the total qualified. Eighteen and nine tenths (18.9%) did not qualify under any criterion (Category D organizations).

When measured against the criterion of whether or not they assigned specific missions and specific objectives to their subordinate organizations and used these specific objectives to measure the performance of subordinate organizations, approximately 53% (Category X organizations) of all of the 687 organizations qualified. Figure I indicates how this number was proportioned between Category A, B, C and D organizations.

When asked whether or not they believed that written statements of missions and objectives were vitally necessary, helpful, or not necessary, 61% of all the respondents indicated that they believed that a mission statement was vitally necessary, 38% believed that it was helpful and only 1% believed that it was not needed. Fifty percent (50%) indicated that they believed a written statement of objectives is vitally necessary, 47% stated that they believed that this written statement is helpful, and only 3% indicated that they believed it is not necessary. (Figures XVIII and XIX illustrate the above statistics.) Only 23% (Category Y organizations) of the respondents believed that both written statements of missions and specific objectives were vitally necessary for management purposes. The distribution of these respondents by Category A, B, C and D is also shown in Figure I.

# SUMMARY OF QUESTIONNAIRE RESPONDENTS

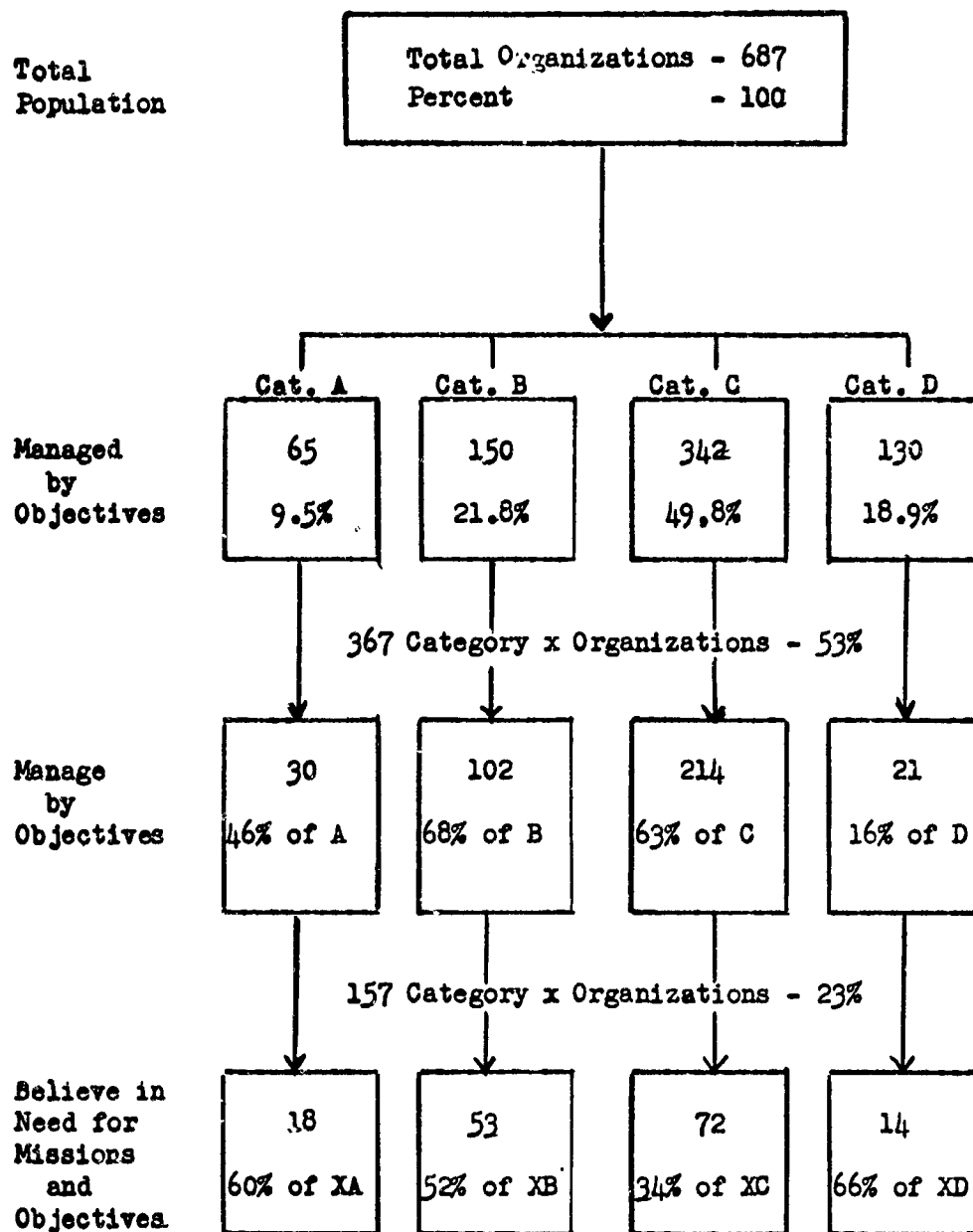


Figure I

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In accordance with the statement of the problem as given, the research group arrived at two distinct sets of conclusions, one set as to what "should be" and one regarding the survey findings.

With respect to the "should be" or theory portion of the research report, the research group presents a concept of its own but believes that it has only scratched the surface of how objectives can be used in the management of organized efforts. The group arrived at a conclusion as to a situation which should exist; it did not discover or develop any specific mechanics as to how the situation should be brought about. It is the opinion of the group that additional efforts should be expended by the Air Force to develop concepts of management to be used for solution of Air Force management problems.

With respect to the findings resulting from the survey questionnaires, the group was forced to conclude that, assuming the theory to be correct and the sample representative of the population, a large majority of Air Force organizations are not (or believe they are not) being managed in terms of specific objectives. About half are managing their subordinate organizations in terms of specific objectives.

Analysis of the data without reference to the model indicates that Category C organizations represent 49.8% of the total. The differentiating characteristic of Category C organizations is that they manage on the basis of informal objectives.

The research group believes that the identification of the basic concept under which Air Force organizations are managing and being managed should be the subject of a separate research effort.

THE NATURE  
OF  
OBJECTIVES

The importance of objectives in the management of organized efforts is well documented. To mention a few sources:

Dr. R. C. Davis (3) states that: "It is evident that the business objective is of primary importance. It must be the starting point of thought and action in the conduct of business operations...its requirements should be specified with respect to quantity, quality, time and expense." (p. 90)

Holden, Fish and Smith (2) state: "There is nothing about an organization more important than its future. Owners, management, employees and society in general are or should be more concerned about where a company is going than where it has been. In any institution, the responsibility for visualizing, initiating and achieving future objectives rests with its top management. The more specifically the future course of a company is conceived and defined, the more likely is its realization. One of the greatest needs observed during the course of this study is for more adequate planning and clarification of future objectives, both near-term and long-range." (p. 4)

Manley Howe Jones (4) states that: "To make good decisions, men and companies must select goals that have real meaning to them; and they must convert the vague images in their minds into more explicit mental pictures, which they can frame in words. The idea is useful only when these goals are visualized as specific things wanted by a particular person (or particular company). Secondly, he (or it) must also move down a step to what we are calling the intermediate goals - to the means of achieving the ultimate goals. This brings us a step nearer the point where we can take some action." (p. 12)

Considering the intrinsic nature of objectives, Dr. R.C. Davis (3) describes objectives as being "values". He states that: "An objective may be any value or values that are needed or desired by any individual or group, provided that the latter is willing to make some sacrifice or effort to obtain them. The values may be any satisfaction of a need or desire." (p. 90)

Based on the foregoing, it appears that all organized efforts must have as their objective the creation of value(s) required by the recipient or customer while at the same time, acquiring the value(s) necessary to maintain the organization. The organization must be maintained over the span of time required for the continued provisioning of values to the recipients. In the economic world a business must receive equal or more value in exchange for the value it provides if it is to continue in business. Insofar as government organizations are concerned (or any agency supported by public funds) the effectiveness of such organizations can be



measured by determining the degree to which such organizations provide satisfactory service. Under the democratic form of government it is assumed that the electorate, through their representatives, will bring about discontinuance of such organizations when the service is unsatisfactory or when the cost of this service is considered excessive by the taxpayer. "Profit" in this sense is primarily a political phenomenon of convincing the recipients (tax payers) that the particular services are necessary and efficiently provided.

It is apparent that the value (objective) created by an organization has two different worths. One of these is the worth of the value to the customer or the recipient of the value. The other is the worth to the organization which produced the value. The first worth represents what the customer is willing to pay or exchange for the value and the second is what the organization is willing to accept in exchange. Organizations providing values can exist only so long as the customers deem these values to be of such worth that they, the customers, are willing to exchange values which they own for the values produced by the organization. It should be noted that this may not be money values; these values may be efforts of individuals to support spiritual, fraternal or social organizations by contributing their time and effort to the success of the organization. Taxpayers deem that the defense provided by the military services be worth the taxes that they pay.

It is not intended to present herein an economic theory of the value of objectives. What is intended is to point out to the reader that, in discussing the nature of objectives, it must be realized that an organization must have a two-fold objective: first, the value to be created, and second, the value to be received as a result of this creative process.

Figure II illustrates the relationship between the values dispensed and the values received together with the differing nature of the balancing system in private business compared to the Air Force (or any wholly tax-supported entity). The total value created by the organization consists of the values created by management, labor, physical resources and capital (if any). The sum of these total values represents the worth of this value to the organization as indicated by  $V_{wo}$ . This is the worth that the organization must have returned to it for the value it has created. This value also has a worth to the customer ( $V_{wc}$ ) which may or may not be the same as its worth to the organization. When the worth to the customer is equal to or greater than the worth of the value to the organization, trade flows and the economic laws operate.

# VALUES DISPENSED VS VALUES RECEIVED

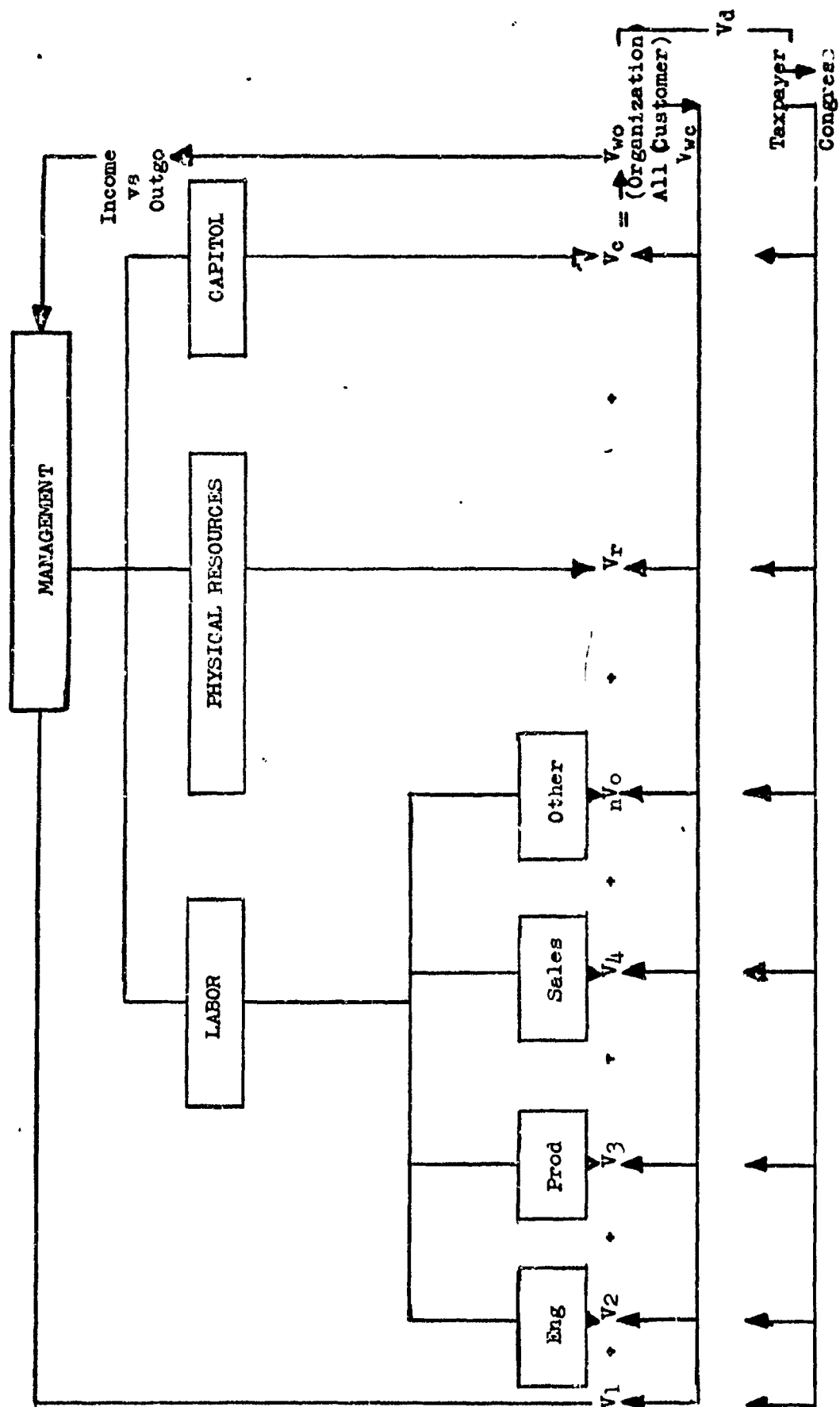


FIGURE II

In the case of the Air Force, the taxpayer is provided with a defense value and he, through his elected representatives in Congress, returns values to the Air Force in order that the Air Force can continue to provide the defense the taxpayer desires. In the business world, changes in the worth of a value or values to the customer is felt immediately by the reduced or increased flow of values to the organization.

In the Air Force the effect of returned value is not immediately felt in the increase or decrease of the values necessary for the continued existence of the organization. The changes in the worth of the value of defense to the taxpayer are translated to the Air Force by Congress; the same Congress which gives the Air Force its objective. It is this value (objective) which the taxpayer desires. Military organizations must manage their operations without the advantage of comparing the streams of income and outgo of values with the same direct connection of a business providing a value. The lead time to produce weapon systems serves to further complicate this situation since the values being received today by the military will not create actual defense values for several years in the future.

In considering the nature of objectives, the research group classified objectives as being "Specific" or "General". "Specific" objectives are those which are defined in terms of quantity, quality and time. "General" objectives are values which are not defined in quantitative terms. The objective "to make 6.5% profit on invested capital after taxes during the next calendar year" is a Specific objective. "To maximize profit" is a General objective. "To reduce costs", "To maximize efficiency", "Minimum aircraft out of commission because of parts" are general objectives. "To reduce manufacturing costs (code 101) by 10% during the next month using the prior month's costs as a basis"; "zero aircraft out of commission because of parts at all times" are statements of Specific objectives.

General objectives are useful in establishing the direction of progress in contrast to the specific goal to be attained. Henry S. Denison (5) has said: "The range and precision of man's foreknowledge will at best carry him only a few years ahead. Of necessity, then, it is the direction of progress rather than the goal of progress which must be worked out." (p. 188)

Specific objectives are necessary for defining the immediate objectives of the organization which require the application of efforts and resources to obtain the values which are desired in the immediate future. These objectives can not be vague and indistinct since they require that specific work be performed and specific values be created. Specific objectives must define the value to be provided to the customer. Specific objectives must also prescribe the values the organization must receive in return.

There are other classifications of objectives which are not germane to this study. R. C. Davis (3) discusses many different classification characteristics and types of objectives.

In summary, objectives are values produced by an organization. These values have two distinct characteristics; one, the worth of the value to the recipient, and second, the worth of the value to the organization. For the purpose of this study, objectives are classified as "General" and "Specific". General objectives are guides; specific objectives are goals to be attained through operations. Military organizations are at a disadvantage compared with business firms in that they do not have the opportunity to gauge their efficiency and effectiveness by direct comparison of outgoing and incoming values. In the absence of this opportunity, the definition of objectives as a management tool would appear to be a necessary condition for management of operations in the Air Force.

**OBJECTIVES IN  
ORGANIZED EFFORTS**

The word "organization" may be used (6) in the sense that work may be organized, thoughts, facts, people and many other units may be organized. In its broadest context the word "organization" conveys the basic concept of "bringing together" or "combining". When work is organized, efforts are brought together or combined; when facts are organized, they are brought together in relation to each other; when groups of people are organized they are brought together for a common purpose. In every case, certain elements, i.e., thoughts, facts and people are brought together or combined for a specific purpose.

The purpose for bringing together these elements is developed in recognition of the fact that the selected elements, when positioned in an array or order, produce a whole which has greater value than the summation of the individual values of the elements. The whole or unit has value or usefulness because of: one, the intrinsic value of the element itself; and second, the added value provided through the process of positioning in predetermined relationships. Under this concept, "organization" may be defined as the "locating of selected elements in predetermined relationships for the purpose of employing the combination as a single entity."

Under this definition, there may exist human, electrical, chemical, biological, mechanical, and other types of organizations. For example, a common clock spring is a mechanical organization for the storage and release of energy. In this case, molecular "elements" are located in predetermined relationships to each other for the immediate purpose of storing energy and the ultimate purpose of operating the clock. The clock itself is a mechanical organization for the purpose of indicating time. The storage battery is a chemical organization for the purpose of storing electrical energy through the positioning of selected chemical elements. An electrical thermostat is a combination electrical-mechanical organization. Organization of data occurs when certain numbers are placed in predetermined relationships to each other for the purpose of addition, multiplication, subtraction, or when charts and graphs are prepared for the purpose of indicating the relationship of certain facts. The human body is a biological organization. The organization of human efforts is a process of bringing together individuals and arranging them in predetermined positions and relationships in order to accomplish an objective which requires the physical or mental efforts of more than one individual.

It is important to note that this definition of "organization" refers to both the type of element and the positional relationship of the selected elements. For example, in the mechanical clock the various gears are made of selected materials and are established in predetermined positional relationships with reference to each other. The successful operation of the mechanism requires that, in addition to the establishment of the position of these elements, the manner in which they will work together, i.e., their operational

relationships must also be established. This is accomplished in the design of the relative size of gears, number of gear teeth, etc. The selection of the various elements, their positioning and the establishment of their functional relationships are each a necessary condition for organization. The combination of all three requirements represents a sufficient condition for organization. (p. 17)

In relating objectives to operations it is a trite observation to note that objectives are attained through the performance of operations. What is not trite or obvious is the concept of how this is done. In his paper "Theory of Logistics", (7) Colonel E. R. Magruder discusses this relationship between objectives, policy, strategy, plans, programs and operations. (Figure III) Starting with an objective the first activity to be accomplished is the development of a "concept of attainment" or "strategy". As a result of this activity a selection is made of one of several or many ways through which the objective can be attained. However, all strategies which might produce the objective are not eligible for consideration. As indicated in the chart by the vertical policy bars, the function or purpose of policy is to restrict the selection of the strategy in accordance with generally accepted principles or ground rules. These restrictions limit the manner in which the objective may be accomplished. For example, the policy of non-intervention in the domestic affairs of foreign governments would prevent one nation from adopting a strategy which involved the provisioning of military weapons to assist in suppressing riots or disturbances. If one government would have the objective of maintaining another government in power, some other strategy would have to be adopted. Means such as financial aid, moral persuasion, economic sanctions, etc., would be possible strategies which could be considered provided that there was no conflict with established policies. On a much smaller scale the housewife may elect to patronize a small independent store in her neighborhood rather than a large chain store because of a policy of supporting locally owned business. Her strategy in purchasing supplies would be limited by this policy. A policy of procuring only union made goods by members of organized labor would restrict the members of the organization in the strategies they could consider and adopt in making their purchases.

Once this strategy has been decided upon and determined to be within the boundaries of existing policies, the next activity is to assign time-phased tasks to elements of the organization. Each task necessary for carrying out the selected strategy must be assigned to some organizational element. This is done in the planning function. A plan can be considered as the present concept of a series of sequential and concurrent events which, if

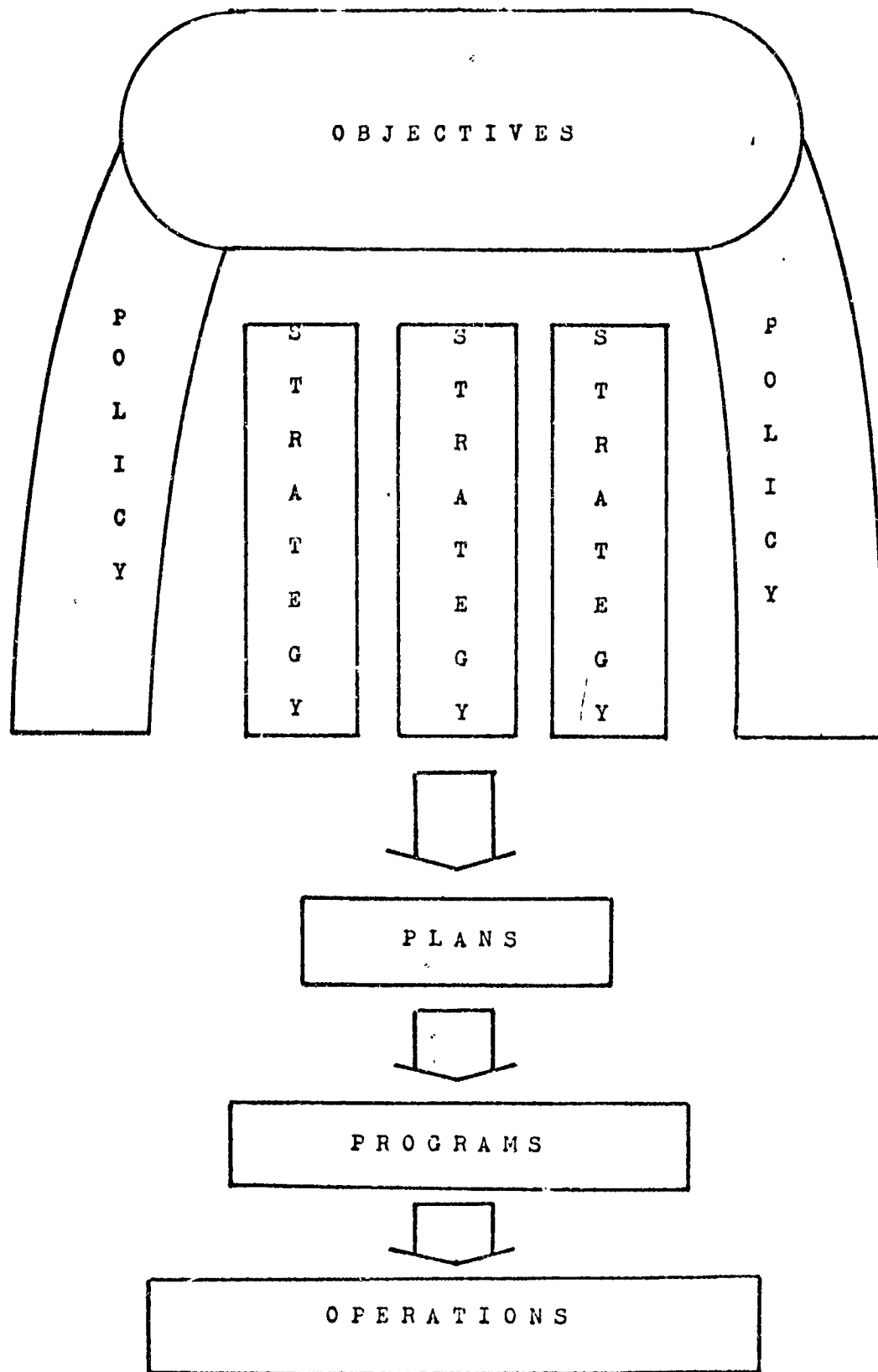


FIGURE III



brought about in adequate terms of quantity, quality and time, possesses a presently acceptable probability of producing the desired objective. The plan converts the strategy into time-phased assignments of tasks to component elements of the organization.

A program, in Air Force Terminology, is defined as (7) "a projection of inventory positions or operating rates, showing how the Air Force plans to get from a current position to approved objectives". (p. 2) A program gives time and place utility to the plan by specifying the present, intermediate and final positions that have been approved for attainment.

Operations consist of the time-phased accomplishments of the requirements of the plan in accordance with the requirements of the program. It is through the performance of operations that values are created.

The foregoing charts describe the relationships between objectives, policies, strategy, plans, programs and operations without reference to either organization or to time. Figure IV is designed to show the sequence of these related activities in time, the relation of these activities to organization and the effect of change on these activities as time passes. Given an objective to be attained at a future point in time, the sequence of activities of selecting a strategy developing policy, planning and programming follow until operational activities produce the objectives. As thus described, the operation would be intermittent or cyclical. In actual practice, objectives are continuously being revised, policies are being changed, strategies modified, etc., so that these activities become continuous in time. Their development and change exist as a continuous function, producing a continuous stream of products. The diagram illustrates that there is a continuous flow of operations producing a continuous series of objectives, each of which is a stepping stone to the ultimate objective. The ultimate or long-range objective continues to recede into the future and remains at a distance fixed by the length of time over which the organization attempts to perceive its long-range objectives. The present status is the result of attainment of past objectives and the attainment of future status will be the result of the change in the present status.

Since the planning function prescribes the tasks to be performed it is from this function that the design for organization emerges. The tasks must either be assigned to existing organizational elements or the planners must anticipate the creation of the organizations which will perform the tasks. As time passes organizations may change in accordance with the changing requirements of the plan. The assignment of a continuing task through time is defined as a mission. The fundamental concept illustrated by the chart is one of change.

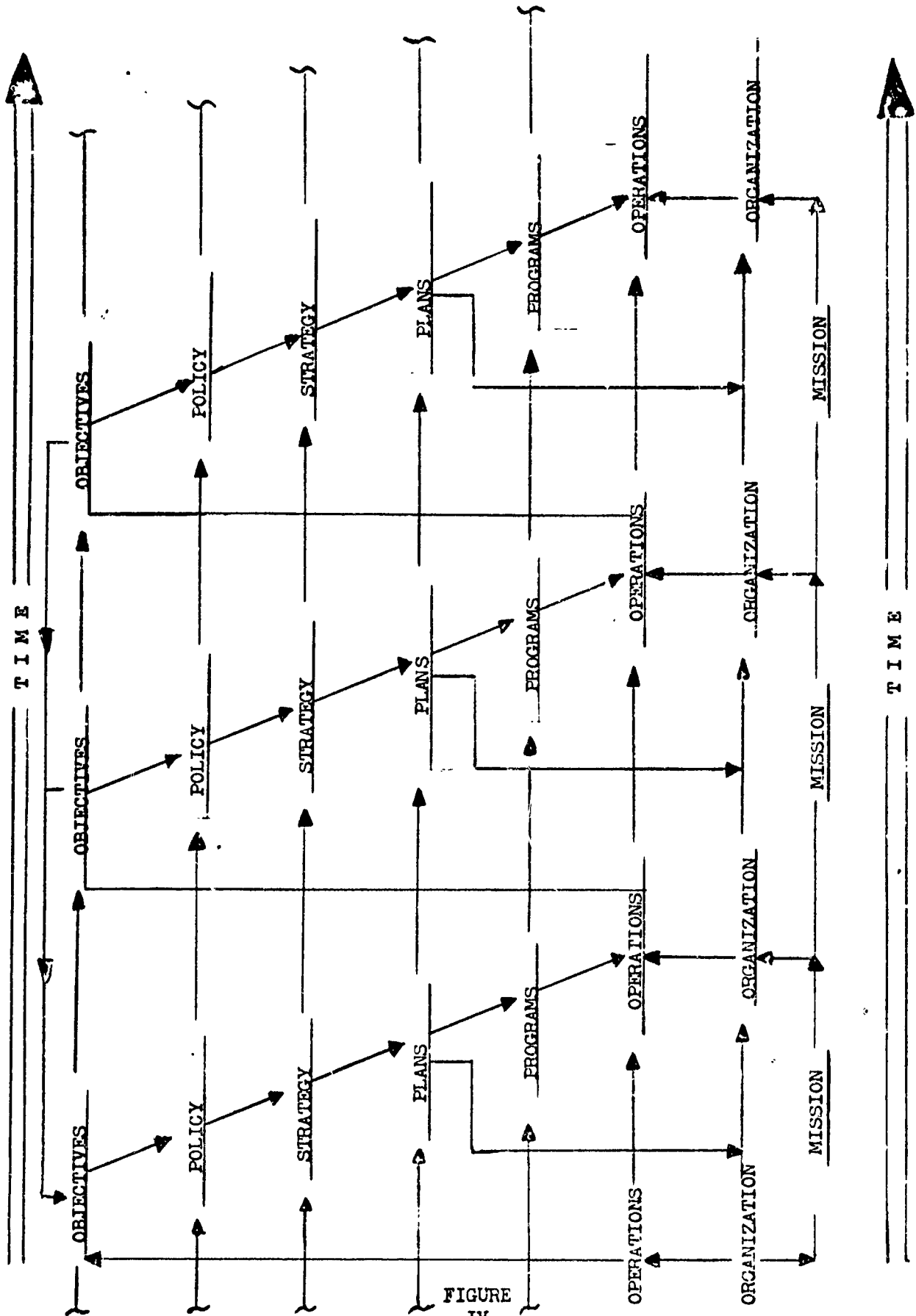


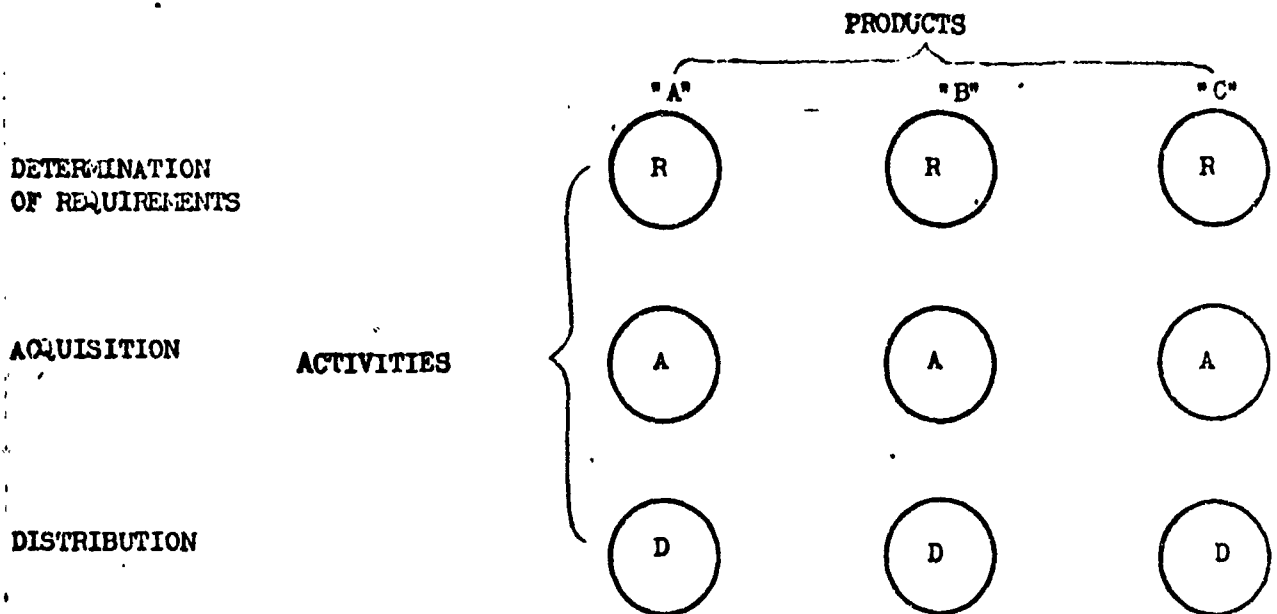
FIGURE  
IV

Figure V illustrates the relationship between organization, management and missions. The small circles at the top represent groups of continuous activities; in this case, the activities of determining requirements, the activities of acquisition and the activities of distribution which have been identified (7) as constituting the totality of the activities necessary to the attainment of all Air Force Logistics objectives. It is possible to organize these activities in two ways. They can be organized by placing all of those which have to do with the determination of requirements together in one organization, all of the acquisition activities together in another group, and all of the distribution activities into a third. The activities are now organized on a functional basis.

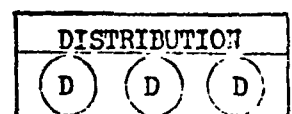
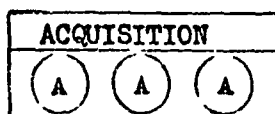
It is also possible to organize the activities on a product basis. In this case the activities involved in the determination of requirements, those involved in acquisition and those involved in distribution for a given product would be organized into one group; the activities involved in determining requirements, acquiring and distributing another product would be organized into a second organization; and another organization would be established for the activities of determining, acquiring and distributing another product. This proceeds until all of the products to be acquired and distributed have been covered. The activities are now organized on a product basis. If activities are organized on a functional basis for an indefinite period of time, the organization is assigned a mission of determining requirements; a second organization is assigned a mission of acquisition; and a third organization is assigned a mission of distribution. The mission assigned to each of these organizations represents the totality of the continuing activities to be performed. The activities of management, i.e., to plan, organize, direct, coordinate and control (8), are not directly related to the objectives, but are made necessary by the process of organization.

Figure VI is intended to illustrate the relationship between missions and objectives. Assuming the assignment of the management activities to one group, the determination of requirements activities to a second, the acquisition activities to a third, and the distribution activities to a fourth group, it is now necessary to introduce into this organization the job to be done or the objective to be attained. The determination of requirements organization must be assigned the specific objective of determining requirements for a given product. Activities involved in acquisition must be assigned the specific objective of acquiring a specific product, and the distributing organization assigned the task or specific objective of distributing a specific product. As time passes, each of these organizations could be assigned a series of tasks or objectives.

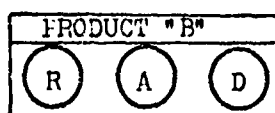
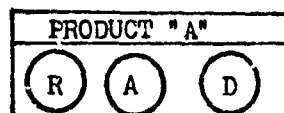
# ORGANIZATION OF EFFORTS



FUNCTIONAL  
ORGANIZATION



PRODUCT  
ORGANIZATION



MISSION  
ASSIGNMENT

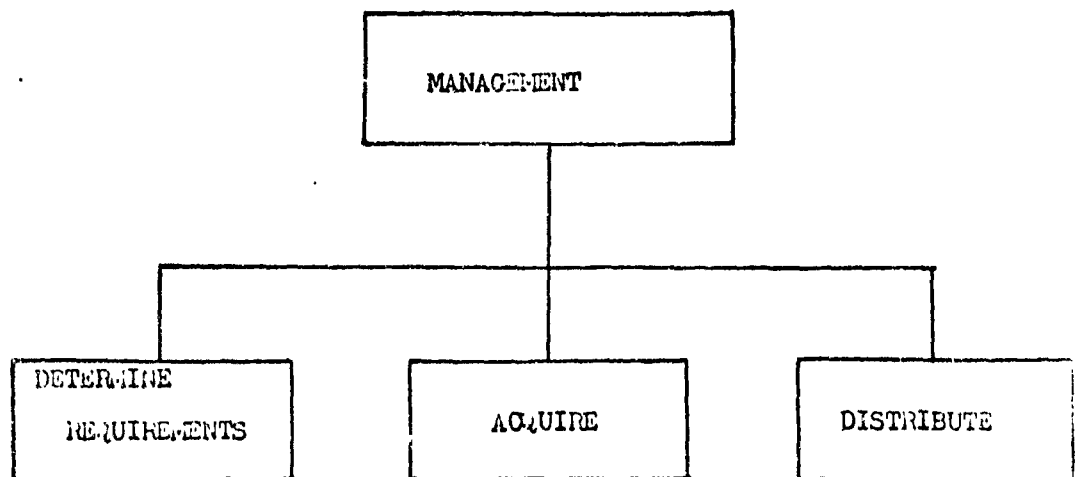


FIGURE V

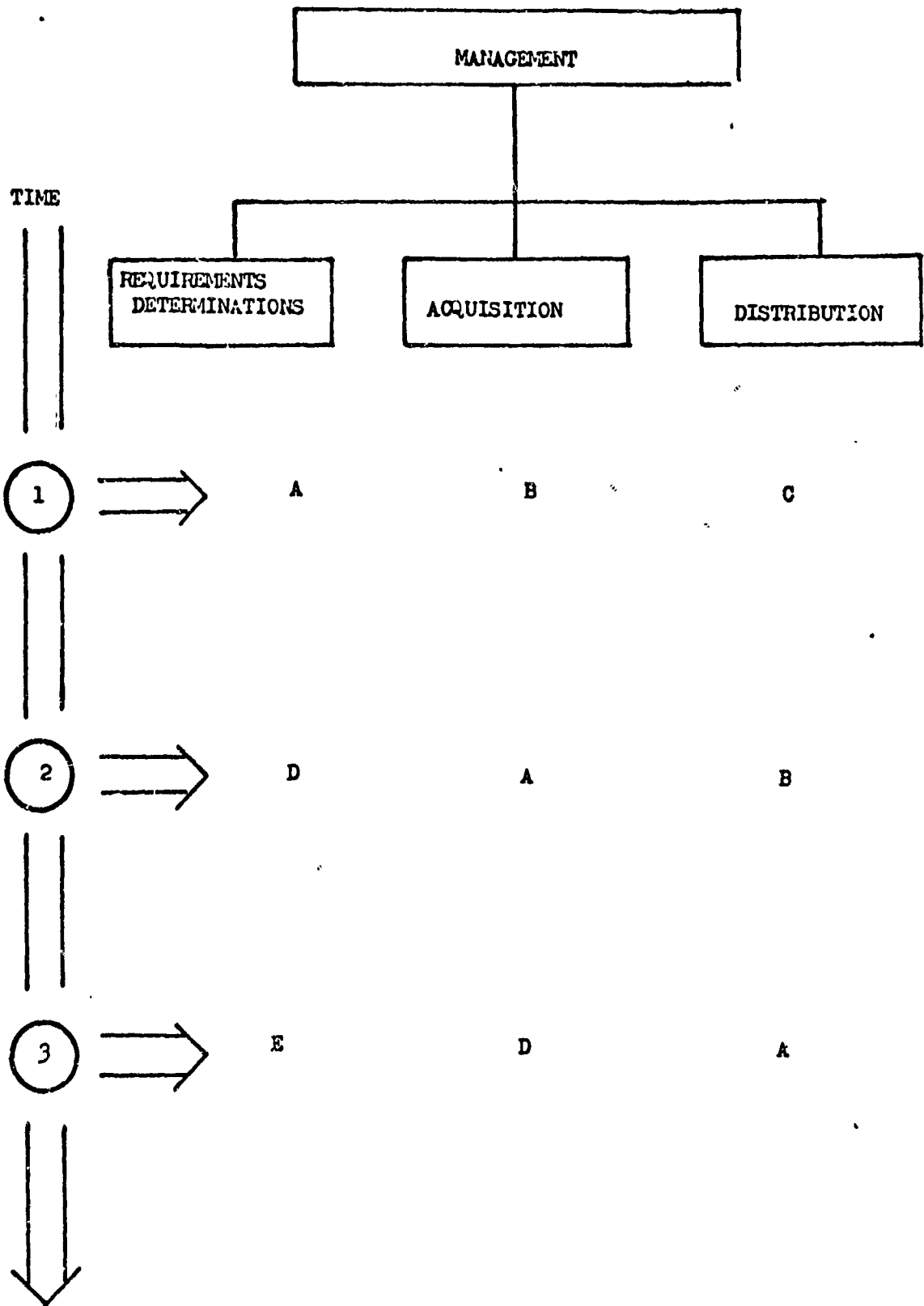


FIGURE VI

# NOT REPRODUCIBLE

The chart shows the assignment of objectives A, D, and E to the requirements organization at differing points in time; the acquisition of B, A, and D at a different time and the distribution of C, E, and A at another point in time. The objective may change while the assigned mission remains the same. In summary, missions are groups of continuing activities assigned to an organizational element; objectives are the products produced by the application of these activities in accomplishing specific tasks.

Figure VII illustrates the function of management control. Management control may be defined (5) as "the function of insuring that the plans and operations of an organization result in the attainment of the objectives of the organization". (p. 41) There are two major divisions to the function of control; Administrative Control and Operational Control. Administrative control insures that plans have an acceptable probability of producing desired objectives and operational control insures that operations conform to plans. These control functions are performed through application of the processes of Perception, Comparison, Decision, and Adjustment. In the application of Administrative control the Perception process obtains information as to the objective to be produced and information as to the series of events specified by the plan which are intended to produce the objective; the Comparison process compares the planned intermediate objectives with the step by step prediction of the plan; the Decision process provides the means by which the necessity for adjustment of the plan or change in the objective is determined and finally the Adjustment process provides the means by which the plan is adjusted or the objective is changed. In applying these processes under the function of Operational control, the Perception process provides the means by which information is obtained as to the status of operations and the requirement of the plan for the status specified by the plan at the time and for the particular operation involved; the Comparison process provides the means through which the actual status of the operation is compared to the planned status of the operation; the Decision process provides the means by which the determination is made as to whether or not operations should be adjusted, and finally the Adjustment process provides the means by which operations are adjusted. Control of an organized effort can be attained only when all the processes of control are applied.

Figure VIII shows a three dimensional model which combines the concepts previously explained into one concept of "Management by Objectives". The model consists of three separate planes, each plane representing an organization to which has been assigned a component part of the objective of the total organization. The triangular bar which joins the three organizations (planes) together at the center represents the total objective of the organization. From this total objective each of the three organizations derives

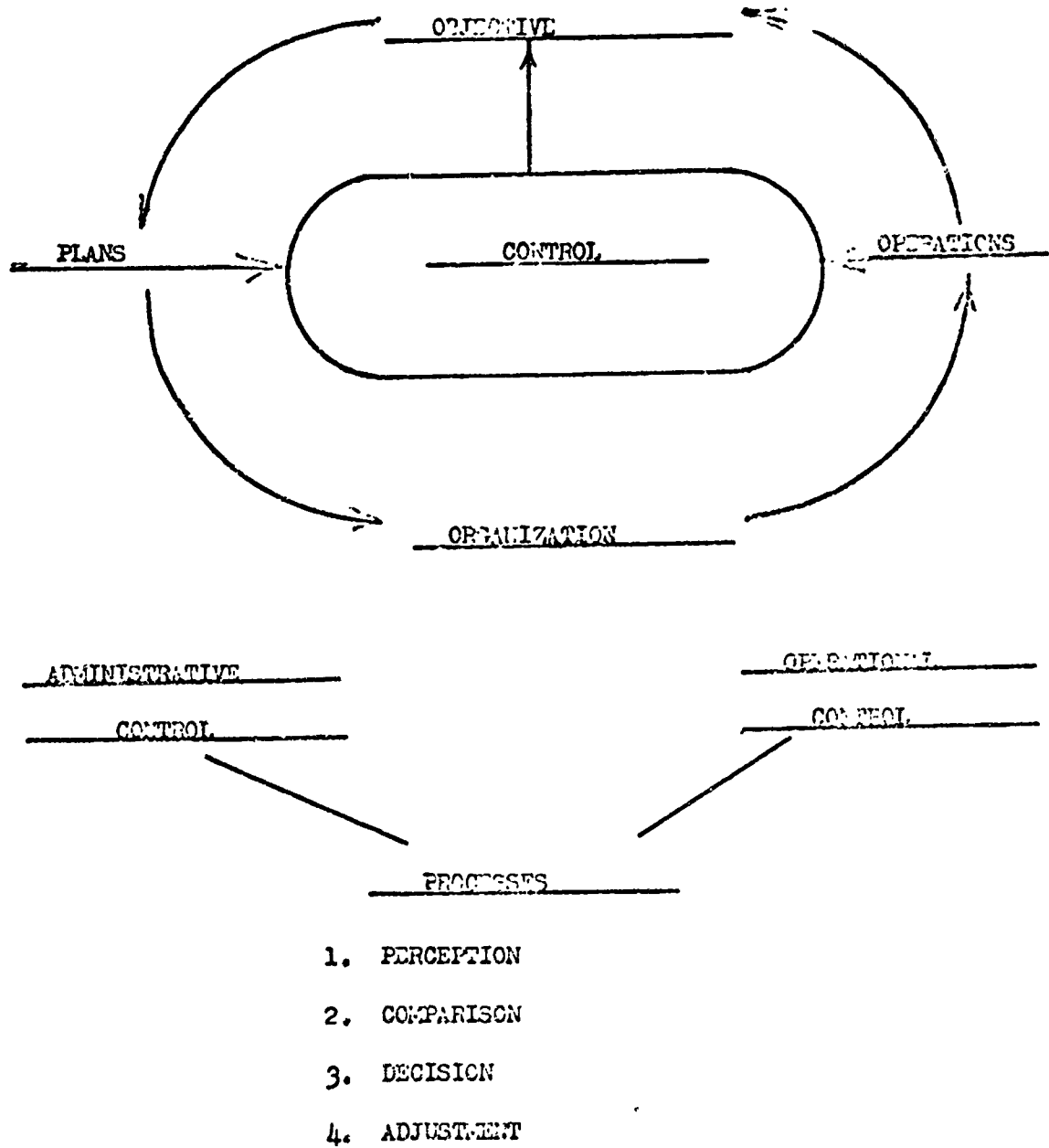


FIGURE VII

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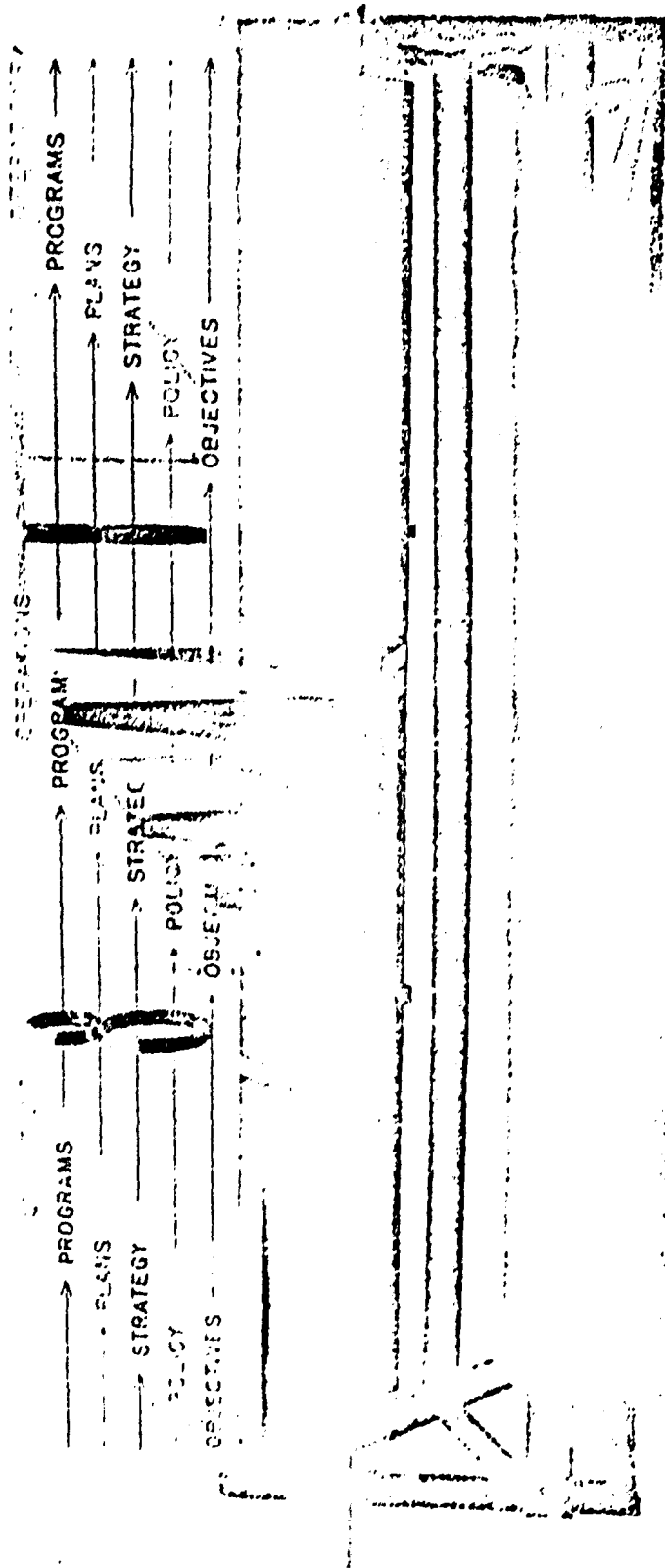


FIGURE VIII



its individual objective. The attainment of the individual objectives of each of the organizations results in the attainment of the total objective of the organization. For example, one plane could represent the activities which have to do with manufacturing a product; the second plane could represent the activities assigned the mission of selling the product; and those activities assigned the mission of distribution could be represented by the third plane. In each of these organizational planes is inscribed the time-phased continuing relationship between objectives, strategy, policy, plans, programs and operations which are internal to the organization in the accomplishment of its given objective. The circular rings in each plane represent the application of the function of control by that organization. The large ring represents those activities which insure that plans have an acceptable probability of producing the objective and the small ring represents those activities which insure that operations conform to plans. The straight bars which extend from one plane to another connect the continuous activities of selecting strategies, developing policies, developing plans, etc. These bars represent the activity of coordination between the organizations in order to insure the proper time phased application of those individual activities necessary to the proper time-phased accomplishment of the total objective. They represent the medium through which the process of adjustment of the function of control takes place, i.e., that consistent strategies, consistent policies, consistent plans, consistent programs, and consistent operations eventually result in the continuous production of the successive intermediate objectives of the organization and finally its ultimate objective. The white bar extending across the front of the model represents the passage of time.

The model combines the several concepts previously outlined in this section and is intended to convey the basic concept that objectives form the hard core basis for the management of the continuing activities of an organized effort.

The increase in the magnitude of the management problem when the size of the organization is increased is indicated in Figure IX. The organization represented is that shown by standard organizational charting techniques at the bottom of the page. Each of the organizations at the extremity of the line connects the four component objectives  $C_1$ ,  $C_2$ ,  $C_3$ , to  $C_4$ , the center objective (O) is the same as that illustrated by the triangular bar in the three dimensional model. The problem of coordinating all of the activities of these organizations toward the attainment of a common objective in adequate terms of quantity, quality and time is extremely complex.

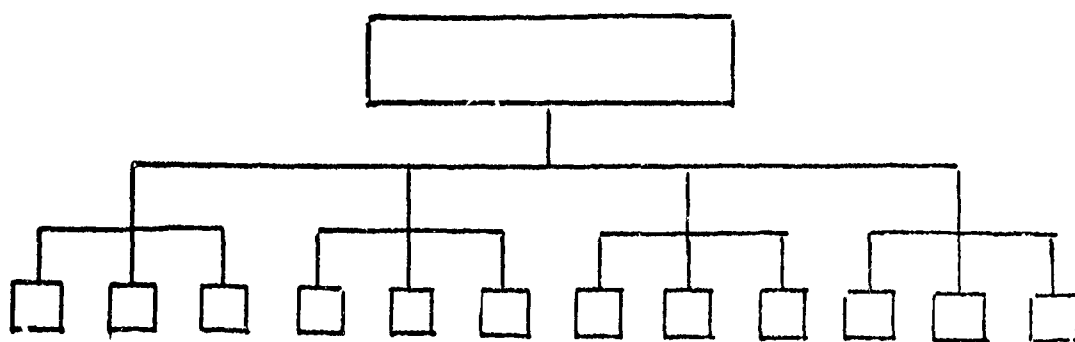
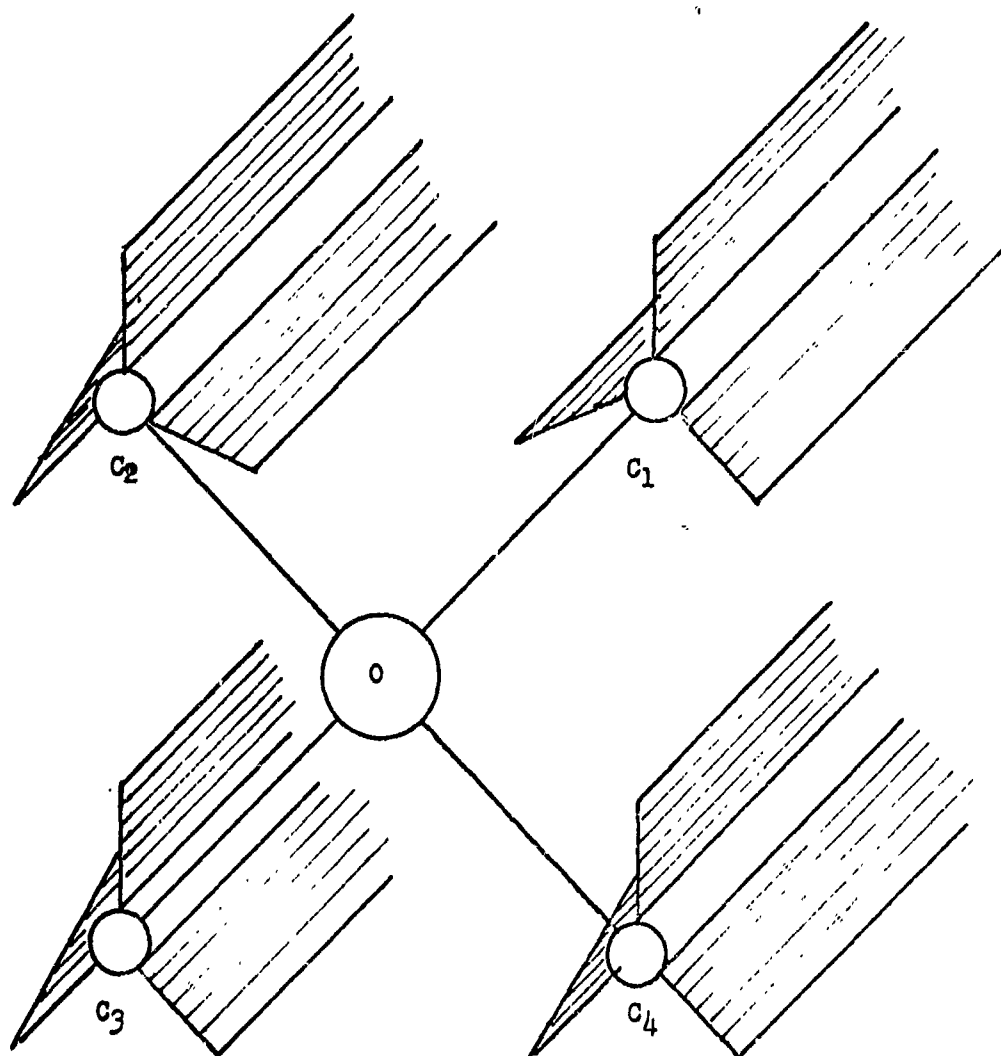


FIGURE IX

In actual practice the application of the processes of control results in the selection of situations which are known or assumed as representative of the combined effect or result of a large number of events. Inventory control is a comparison of the results of all the events involved in purchasing, receiving, storing, etc. Personnel turnover is considered a reliable indicator of events designed to satisfy the motives of human elements of the organizations. The profit and loss statement is one tool for measuring the resultant effects of many events. In applying the processes of administrative control, management of the organization must continuously evaluate the actual environment which is encountered and compare it to the environment predicted when the events were specified in the plan. The necessity to continuously identify changes in objectives is obviously vital. The principal difficulty in the application of operational control is obtaining an adequate basis of comparison.

Practical solutions to the problem of control are essentially statistical techniques in that situations selected for review are assumed as representative of a very large number of events. This situation occurs due to the physical impossibility of applying the processes of control to each actual or planned event. The problem of control is the determination of the number of such situations which must be examined in order to obtain adequate evaluation of the efforts of the organization in effectively and efficiently accomplishing the desired objectives. In one sense the management analysts who serve the managers in this respect are diagnosticians of the management health of the organization as a whole. In applying the principle of management by exception they develop techniques similar to those of the doctor when he checks the patient's blood pressure, pulse rate, temperature, etc. They look for reliable indicators of the state of health of the organization as a whole in accomplishing its assigned objectives.

In summary, organizations exist for the sole purpose of attaining objectives. Continuous changing of objectives and the methods of attaining them requires continuous adjustment of the operations of each element of the organization in order to assure attainment of the total objective. Objectives must form the hard core from which the planning, organizing and control functions of management must emanate. It is this hard core which provides the basic point of reference which permits the organization to be managed effectively.

MANAGEMENT  
BY  
OBJECTIVES

R. C. Davis (3) states that: "The organic management functions are those of creative planning, organizing and control of the work of others in the accomplishment of a common objective." (p. 154) In order to illustrate the difference between the use of specific and general objectives in the application of the management control function, several examples are useful. Let us assume that there are three individuals who are having difficulty with their automobiles and decide to take them to a garage for repair. Each of these individuals has a concept or idea of his objective. We may assume that each has the same objective which is to restore the condition of the car to "normal operation".

The first individual describes the nature of the difficulty to the mechanic and instructs him to look it over and if he finds anything wrong to "fix it". The owner of the automobile has turned over to the mechanic the complete management control function. The mechanic applies the control process of perception when he investigates the wiring connections; he applies the comparison process when he checks the points clearance; he decides what should be changed or adjusted and he adjusts by repairing or changing that which he discovered to need repairing or changing. In this case the objective of the organized effort (owner-mechanic) was the mechanic's concept of "normal operation" as the mechanic defined it. This concept of "normal operation" may or may not be the same as that of the owner. The owner assumed that the two were the same when he gave the mechanic the general objective of "fix it".

By delegating his management responsibility, the owner has agreed to accept the results produced as being the objective to be attained regardless of the cost or resources involved. If the mechanic decided to completely overhaul the engine, the owner may have objected to the size of the bill. In this case the owner, by default of management control prerogatives, has agreed to accept the value produced and its concurrent cost.

From the foregoing it is apparent that the powers of management control or the right to control may be delegated when the parent organization is either unwilling or unable to specify the value to be produced and/or when the parent organization is willing to accept the values produced as being the objective regardless of what these values might be.

The second car owner adopts a slightly different approach. Having no technical knowledge of the automobile but realizing that the cost of bringing it up to normal performance might be more than he would be willing to pay, the owner consults with the mechanic. The owner explains the symptoms to the mechanic and

the mechanic advises the owner that any one of several things might be the cause of the difficulty. In so doing the mechanic advises the owner as to what constitutes "normal" for the possible defective operations and the costs of bringing each of these operations up to normal. The owner advises the mechanic to repair the car provided that the cause is one of those suggested by the mechanic and the cost does not exceed a specific amount.

In this case, the owner, due to his concern over the possible cost of attaining his objective, has decided to control the operation a little more closely than did the first owner. Realizing that he lacks the technical knowledge he obtains technical advice and decides that if the technical difficulty is any one of those suggested by the mechanic and if the cost of rectification is not over a certain figure, he is willing to accept the results within these limits. As a result of his conference with the mechanic, he has established a specific objective. By limiting the kinds of repairs that could be made and the total cost of such repairs, the owner has quantified the objective for the mechanic. The mechanic can now control his operations with the assurance that the results will be acceptable to the owner. This is an illustration of management by exception by the owner; the exceptional case being when a cause other than that anticipated by the mechanic would be found or where the total cost would exceed a fixed amount.

In examining this case in the light of management principles it is evident that both the owner and the mechanic exercised the management control function. The owner was convinced that the plan was capable of producing the objective based upon the advice given to him by the mechanic. The principal concern of the owner was the assurance that both he and the mechanic had the same concept of the objective. The owner was also concerned over the cost of attaining this objective since it might be cheaper for him to buy a new car rather than to repair the old one. The basic point is that the mechanic was given the opportunity to control his work to attain the objective which both understood. This opportunity was created when the owner specified the objective and the worth of the objective to him. Within these limits the mechanic could make decisions and adjustments.

The third car owner is an expert mechanic. Believing that he has more technical knowledge than the garage mechanic, he specified a series of operations that should be performed and obtains an estimate. Accepting the estimate he instructs the mechanic to perform certain specific operations. Upon receiving the car he checks to make sure that all of the operations were performed, accepts the car and pays the bill.

The third car owner has not defined any objective to the mechanic - either general or specific. He has delegated the work to the mechanic; he has not delegated any management powers or responsibilities. He alone exercises the Perception, Comparison and Decision and Adjustment processes of control. Since the mechanic accepts the authority of the owner (and his money) he carries out the adjustment operations as the owner specified them. It should be noted that the mechanic can produce the objective without any knowledge of what it is. His personal objective is to carry out the instructions and satisfy the owner. He has no responsibility for results - only for carrying out the instructions.

A comparison of the three methods indicates that the principal difference is in the degree to which the owner specifies the objective, the degree to which he and the mechanic divide the control function. The first owner provided a very general objective with no limitations on what was to be done or its cost. The second owner specified an objective in terms of both what was to be done and its cost. The third owner provided no objective, either general or specific. The degree of application of the control processes by the owners increased from the first owner to the third owner with the corresponding decrease in freedom for application of the control processes by the mechanic. The second car owner divided the management control responsibility between himself and the mechanic and utilized the management capability of the mechanic while still retaining some degree of control.

If this analogy is extended to a larger organization, the effect of different techniques is more apparent. In the case of an owner of a small manufacturing organization (which is organized into a production, sales and distribution organization), the choice of methods may be much more important. In this case the demand upon his time may be such that he cannot direct each individual action and on the other hand he cannot give each organization a general objective and hope that they all come out even. The values produced by the production organization are the same values which must be sold by the sales organization and distributed by the distribution organization. The value to be produced must be specific, the values to be sold must be specific, and the values to be distributed must be specific.

The manager is thus faced with the problem of having to give the heads of his three organizations the opportunity, power and responsibility to control the operations of their individual organizations. Using the owner-mechanic relationship as a standard of comparison the owner can give each of his managers the maximum opportunity to control their operations by establishing specific objectives for each organization assuring the correct concept

# NOT REPRODUCIBLE

or understanding of the objective and establishing the limits within which the managers will be free to exercise their management control processes. As it was important to the car owner to know the cost of repair, it is also important for the owner of the business to know the worth to the consumer of the value his organization produces.

It is important to note that a business man could not imitate the first car owner. He could not abdicate his management responsibility and permit each of his managers to work toward and control his operations to their own concept of their organization's objective. This is true because, in an organized effort where the total objective is sub-divided, each component objective has a direct bearing on other component objectives, the attainment of each resulting in the attainment of the objective as a whole.

While it is inconceivable that any knowledgeable manager would attempt to operate this type of organization without specifying the objective of each organization in terms of quantity, quality and time, it is readily apparent that many organizations find it extremely difficult to define objectives in specific terms. Where the necessity for quantification of objectives is forced upon an organization as an operational necessity (production of a specific item in a specific quantity at a specific quality in a specific time period) the definition of objectives for some organizational elements becomes routine. The difficulty in definition of objectives occurs in those organizations where the values produced are less tangible and measurable. Planning organizations, control organizations, advisory staff organizations and service organizations are faced with this difficulty. However, it must be realized that planning organizations, control organizations, research organizations and the like employ a specific number of persons, occupy a specific amount of space, represent a specific portion of the overhead account, etc. Decisions are made which result in the application of specific resources. While this may present a difficult problem - the identification of specific objectives for these kinds of organizations - the arbitrary allocation of resources should not be justified by using this difficulty as an excuse for failure to make the effort to quantify the objectives to the maximum extent possible.

General objectives have their usefulness in application of the control function of management. "Administrative management" is often used to define a type of management which concerns itself with long range objectives, general plans, general strategy, broad policy, etc. These efforts tend to guide an organization in a general direction rather than toward a specific goal.

The use of objectives in the planning function of management is evidenced by the use of general objectives for broad or general



plans and the need for specific objectives for plans which assign tasks to organizational elements. General objectives cannot be translated into specific tasks without automatically quantifying the objective.

In summary it may be stated that specific objectives are necessary to the management of those operations required to create specific values. General objectives are useful in establishing the general course of an organized effort. The power and responsibility of management can only be properly delegated when objectives are quantified in terms of quantity, quality and time. In order to assure the attainment of the objective of the organization as a whole, component organizations must receive their specific objectives from their parent organizations and must use these objectives to compute the resources they require to attain these objectives.

**SURVEY**  
**METHODOLOGY**

1  
1  
1  
1  
1

#### A. Introduction:

Having established a model or theory of how organizations might be managed in terms of objectives, the next task of the group was to determine the degree to which Air Force operations are being managed in terms of objectives and are managing their subordinate activities in accordance with the theory developed by the group. In order to provide possible evidence with respect to the reasons for use or non-use of objectives, the research group also attempted to ascertain the opinion of managers in the Air Force as to the relative importance of missions and objectives in the organization and management of operations. In order to measure the management activities of Air Force organizations the research group established criteria which could be used for determining whether or not Air Force organizations are being managed or are managing their subordinate activities in conformance with the theory developed by the research group. This criterion was then translated into a series of questions; a group of Air Force activities were selected as being organizationally representative of Air Force management; questionnaires were submitted to this group and a system of analyzing the data was established.

#### B. Development of Criteria:

It was decided to establish four separate categories of organizations depending upon the degree to which they met the requirements established by the theory. These categories and their corresponding qualifying criteria were as follows:

##### 1. Category "A" Organizations:

- a. Must have a written mission statement.
- b. This mission statement must have been given to the organization by higher authority.
- c. The organization must have a single document containing the objectives of the organizational element.
- d. This document must have been given to the organization by a higher authority.
- e. Some of these objectives must be specific in nature.
- f. The specific objectives must be used to compute the resources required by the organization to accomplish its objectives.

# NOT REPRODUCIBLE

## 2. Category "B" Organizations

- a. Must have a written mission statement.
- b. The mission statement can be:
  - (1) Developed by the organization but approved by higher authority.
  - (2) Developed by the organization based on documents or data provided by higher authority.
- c. The objectives of the organization must be given to them in a single document.
- d. These objectives can be:
  - (1) Developed by the organization but approved by higher authority.
  - (2) Developed by the organization from documents or data provided by higher authority.
- e. Some of the objectives must be specific in nature.
- f. The specific objectives must be used to compute the resources required by the organization to accomplish its objectives.

## 3. Category "C" Organizations

- a. The organization must have a written statement of its mission.
- b. The mission statement may be:
  - (1) Developed by the organization but approved by higher authority.
  - (2) Developed by the organization based on documents or data provided by higher authority.
- c. Objectives of the organization may be derived from program documents, letters, teletypes, manuals, regulations, etc.
- d. Some of the objectives must be specific in nature.
- e. These objectives must be used to compute the resources required by the organization to accomplish its objectives.

# NOT REPRODUCIBLE

## 4. Category "D" Organizations:

All organizations not qualifying for Categories A, B, and C were placed in Category D.

## 5. Category "X" Organizations:

This category was established for the purpose of isolating those organizations which managed their subordinate organizations in terms of objectives. Category X organizations met the following criteria:

- a. Must prepare or approve written statements of missions for their subordinate activities.
- b. Must assign objectives to their subordinate organizations.
- c. Some of the objectives assigned to subordinate organizations must be specific.
- d. All or part of these objectives must be used by the organization in measuring the progress of their subordinate organizations.

## 6. Category "I" Organizations:

This category was established in order to identify those organizations which indicated that they believe in the vital nature of written statements of missions and objectives for the purpose of managing operations. Organizations placed in this category met the following criteria:

- a. Believe mission statements to be vitally necessary.
- b. Believe that a written statement of the objectives of their organization was vitally necessary to the organization for managing their operations.
- c. Believe that all organizations should give a written statement of objectives to their subordinate organization.
- d. Believe that some of these objectives should be specific in nature.

C. Design of the Questionnaire:

The questionnaire developed by the research group was based on the criteria indicated above. Included with each questionnaire was a letter explaining the objective of the survey; a set of definitions covering the terminology employed with particular emphasis on the difference between missions and objectives, and the differentiation between general objectives and specific objectives. A copy of the questionnaire and the letter of transmittal is included in the Appendix.

D. Selection of Sample:

In determining which Air Force organizations should be contacted for the purpose of this survey, the research group endeavored to contact that point in the organizational structure which represented the level of transition between the primarily administrative and the primarily operational activities. The research group determined that the division level of the Headquarters organizations and the equivalent of division level at the field organizational level would represent this particular point. In addition the research group believed that it could expect to find a reasonably good knowledge of management principles and their application at this level.

Due to the time limitation of the research project the group decided to restrict the questionnaire to the seven Major Air Force Commands within the continental limits of the United States.

In accordance with this requirement the questionnaire was sent to 144 separate divisions within the 7 Major Command headquarters. Below headquarters level, the questionnaire was sent to 470 base level organizations of 5 major commands and to 152 divisional organizations of Air Materiel Area (AMA) organizations and 107 divisional organizations at ARD bases. This represents a total of 944 organizations within the Zone of Interior which were selected for participation in the survey.

The major commands selected were the Strategic Air Command, the Air Defense Command, the Tactical Air Command, the Air Materiel Command, the Air Research and Development Command, the Military Air Transport Service Command and the Air Training Command. At base level, organizations contacted were: Chief of Maintenance, Chief of Operations, Chief of Personnel, Chief of Supply, Base Comptroller. At the Headquarters of all the commands at the AMA's and depots of the AMA the following organizations were contacted: Materiel, Operations, Personnel, Comptroller, Adjutant, Services. Included in the Services category were such organizations as Information

Services, Provost Marshal, Resources Analysis (Surgeon), Security, Medical Education and Community Relations.

E. The Organization of Data:

After return of the questionnaires the research group entered the results of the answers to the questions on accounting type paper. Plastic templates were used in order to count the number of organizations in each category (A,B,C,D,X, and Y) as previously defined.

Other significant data was obtained by direct count of the answering organizations. The data was collected by Commands for the purpose of comparing the answer by Commands.

F. Quality of Data:

In order to obtain a general impression of the reaction of respondents to the questionnaire and to permit the research group to establish a confidence level regarding the degree of understanding of the respondents, one of the members of the group contacted a representative sample of the organizations surveyed. These visits revealed that, in general, the questionnaire was being given careful attention and that the degree of understanding was adequate. There was a slight tendency for organizations to consider functional statements as being objectives rather than mission assignments.

## FINDINGS



#### A. Introduction:

Survey questionnaires were mailed to 944 Division Chiefs or equivalent level organizations within the Zone of Interior. Seven hundred thirty-two (732) replies (77% response) to the questionnaire were received. Only 687 replies are included in the analysis since 45 replies were received too late to be included in the comparative statistics. The following is a breakdown by Command of the number of questionnaires mailed, the number of answers received, and the percent of response by Command:

<u>COMMAND</u>	<u>QUESTIONNAIRES MAILED OUT</u>	<u>QUESTIONNAIRES ANSWERED</u>	<u>PERCENT RESPONSE</u>
ADC	85	52	61%
SAC	172	126	73%
ATC	156	124	84%
TAC	98	59	60%
MATS	41	32	79%
ARDC	131	96	73%
AMC	<u>261</u>	<u>243</u>	<u>96%</u>
TOTAL	944	732	AVERAGE 77%

In order to provide readers with the opportunity to judge their own thinking and conclusions, data on answers to each of the questions has been included in the Appendix. The information is broken down by Commands for ease of comparison purposes. The findings included in this section are based on data which the group felt was most significant to the research project.

#### B. Management of Respondents:

To determine to what degree respondent organizations are being managed by their parent organizations, the research group applied the criteria and sorted organizations into Categories A, B, C, and D.

Figure X indicates the percent of respondents which met the criteria for a Category "A" organization. The chart illustrates the decrease in the number of qualifying organizations as additional qualifying elements of the criteria are added. The findings reveal that 95.9% of respondent organizations have a written statement of their mission. However, only 42.4% of the total respondents have a written statement of their mission which was assigned to them by higher authority. Only 25.9% have a mission statement assigned to them by higher authority together with a written statement of their objectives. Fifteen and six-tenths percent (15.6%) have a written statement of their mission assigned by higher authority combined with a written statement of objectives given them by higher

PERFORMANCE SURVEY FINDINGS

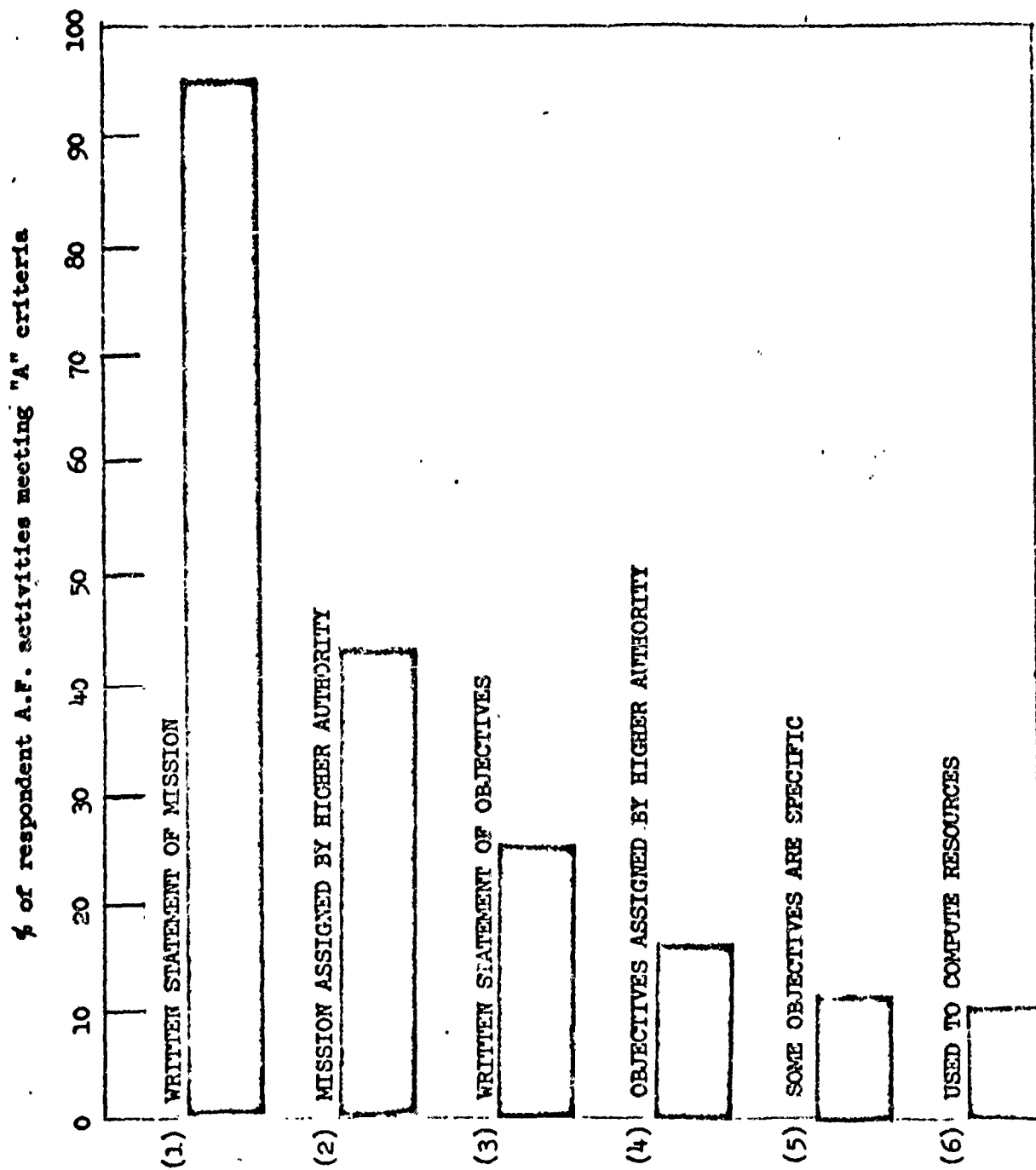


Figure X

authority. The number of organizations is reduced to 11.1% (of total respondents) when they are also required to have specific objectives included in the objectives assigned to them by higher authority. Only 9.5% of the respondent organizations meet the complete criteria of:

- (1) Having a written statement of their mission assigned to them by higher authority.
- (2) A written statement of objectives given to them by higher authority.
- (3) The objectives given to them by higher authority must contain some which are specific.
- (4) The organization must use these specific objectives to compute the resources it needs to do its job.

Figure XI is a breakdown of the total number of activities or organizations in the Category "A" classified by Commands. Attention is directed to the fact that the Commands which are operational in nature have more organizations meeting the Category "A" criteria than do the Commands which are primarily service in nature.

Figure XII illustrates how Category "B" organizations were identified. The chart illustrates how a decreasing number of organizations qualify as Category "B" organizations as additional criteria are applied for qualification purposes. The Chart shows that 95.9% (same as Category "A") of respondent organizations have a written mission statement. The percentage drops to 92.8% when the requirement is applied that these mission statements must be developed by themselves and approved by higher authority and must be developed by the organization based on programs or data supplied by higher authority. When the criterion for having a written statement of objectives is applied, the percentage drops from 92.8% to 49.7%. This is the point where the largest number of organizations are dropped for failure to qualify. A small drop to 44.3% is noted when the requirement is applied of written statements of objectives which are developed by the organization and approved by higher authority or developed by the organization based on documents or data provided by higher authority. Requiring that some of the objectives given to these organizations must be specific in nature reduces the percentage to 28.8%. It is at this point that the second significant loss of organizations occurs for failure to meet the criteria. A slight decrease is noted when the requirement is included that organizations must use their specific objectives to compute the resources necessary to accomplish their objectives. The final figure is 21.8%.

% of activities meeting "A" criteria: by Commands

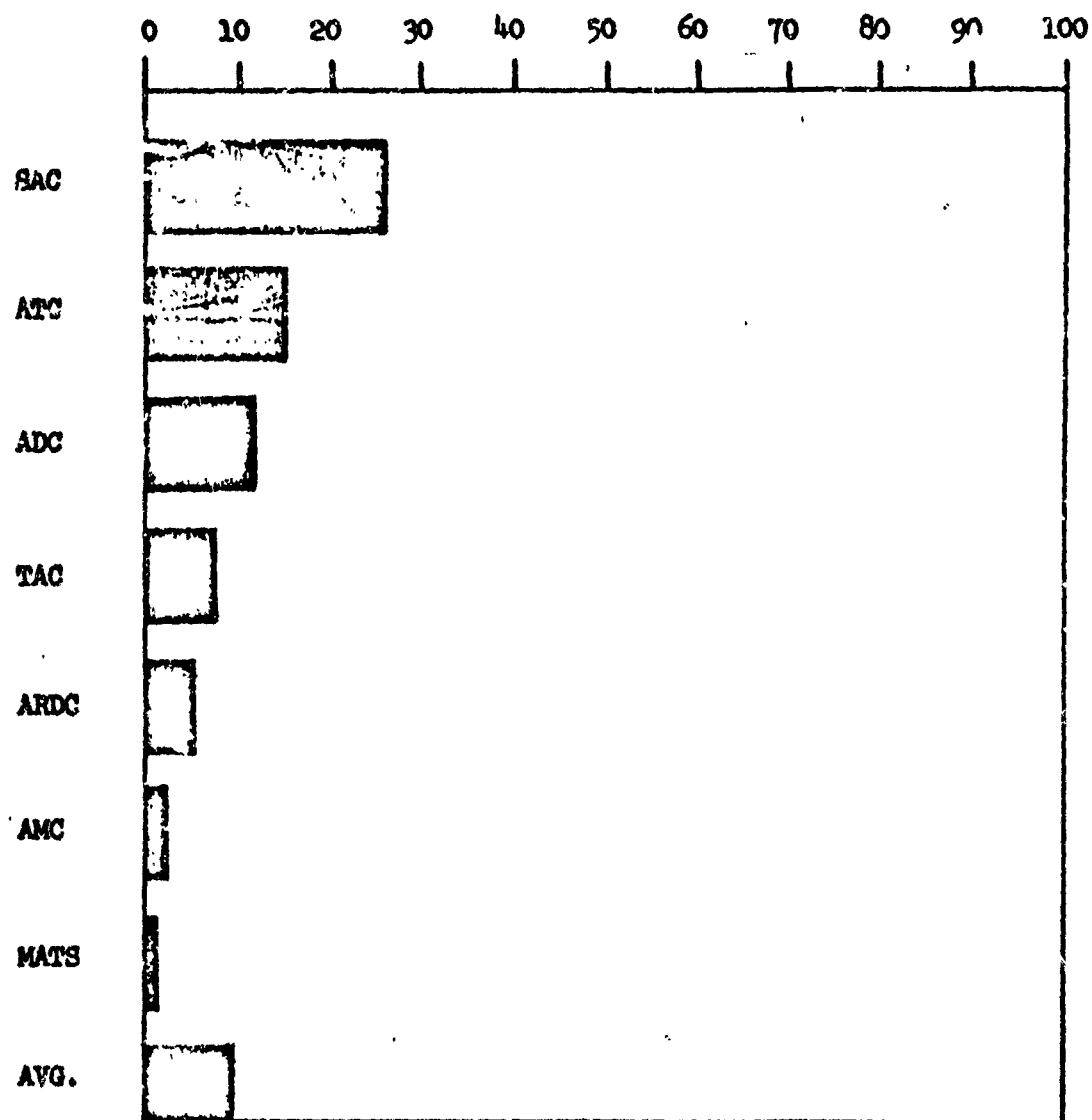


FIGURE XI

% of Respondent activities meeting "B" criteria

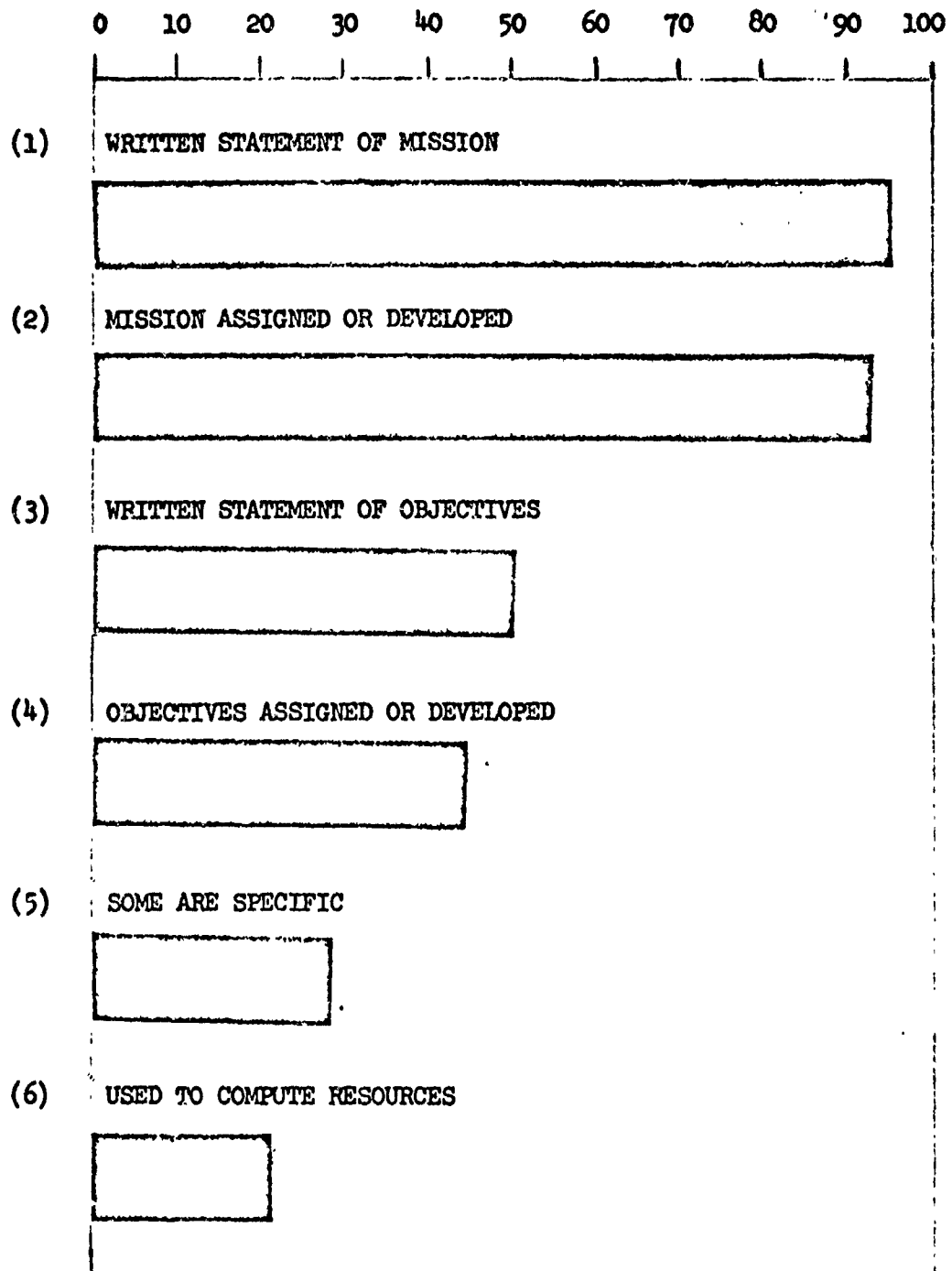


FIGURE XII

Figure XIII indicates the number of respondent organizations who meet Criteria "B" classified by Command. The operational Commands which headed the list in the Category "A" classification now find their positions reversed; the primary service Commands accounting for more than half of the total organizations qualifying.

Category "C" organizations are those which meet a criteria whose standards are considerably relaxed from those of Categories "A" and "B". Figure XIV shows the categorization of organizations as the requirements of the Category "C" criteria are successively applied. Again 95.9% of respondents had a written statement of their mission, 92.8% of the total respondents had this mission statement assigned to them by higher authority. The third step represents the major variance in criteria "C" as distinguished from that of "A" and "B". Under this criteria, organizations are permitted to have informal objectives obtained from sources such as program documents, teletypes, letters, manuals, etc. Fifty-nine and five-tenths percent (59.5%) of the respondents satisfy the criteria when this requirement is added. Forty-nine and eight-tenths percent (49.8%) of the organizations used their informal specific objectives to compute resources required to do their jobs. The significant fact is that these organizations have objectives which are specific and they use to compute resources requirements. The validity of these objectives may be questionable since they were not given or approved by the parent organization.

Figure XV is a division of Category "C" organizations by Commands which is self-explanatory.

Figure VI is a summary chart which summarizes the data showing the number and percentage of organizations qualifying under Category A, B, C, and D and the distribution of the number of these organizations by Commands.

#### C. Management By Respondents:

To determine the number of respondent organizations which manage their subordinate organizations in terms of objectives, the research group established a criterion for Category "X" organizations. In order to meet this criterion, an organization must:

- (1) Prepare or approve written statements of missions for their subordinate activities.
- (2) Assign specific objectives to their subordinate organizations.
- (3) Use all or part of these objectives in measuring the progress of their subordinate organizations.

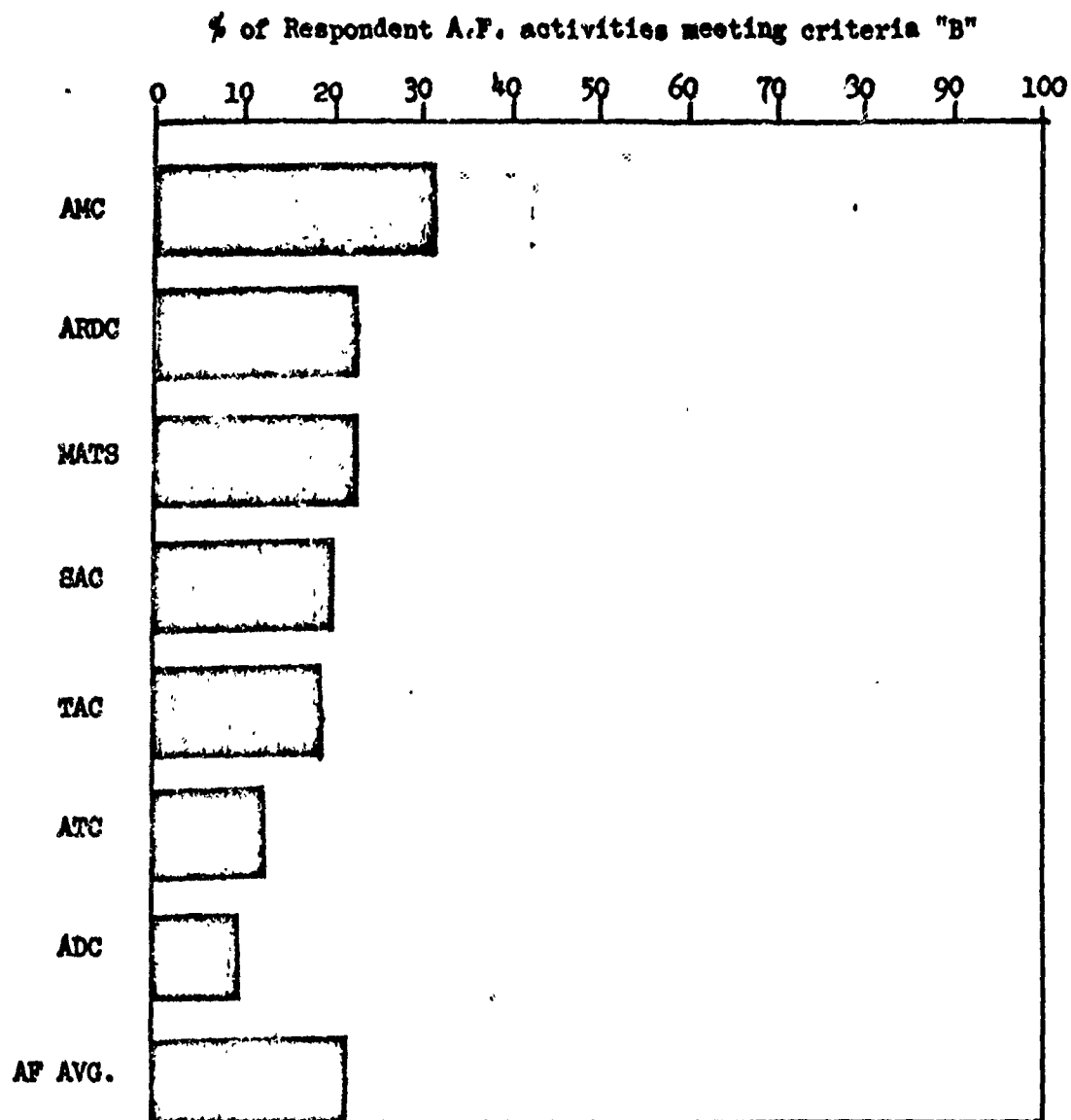


FIGURE XIII

% of Respondent A.F. activities meeting criteria "C"

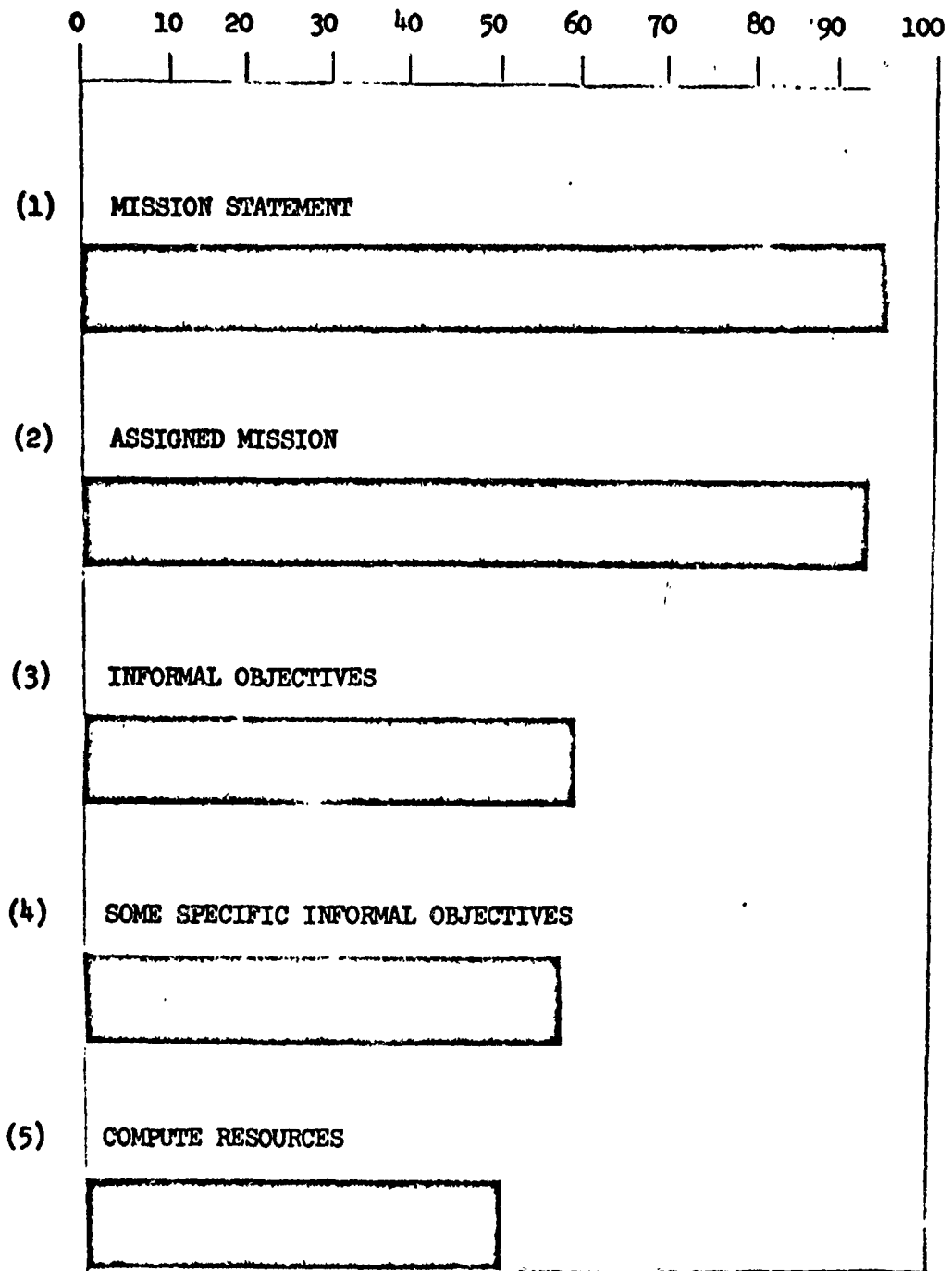


FIGURE XIV



% of activities meeting criteria "C" by Commands

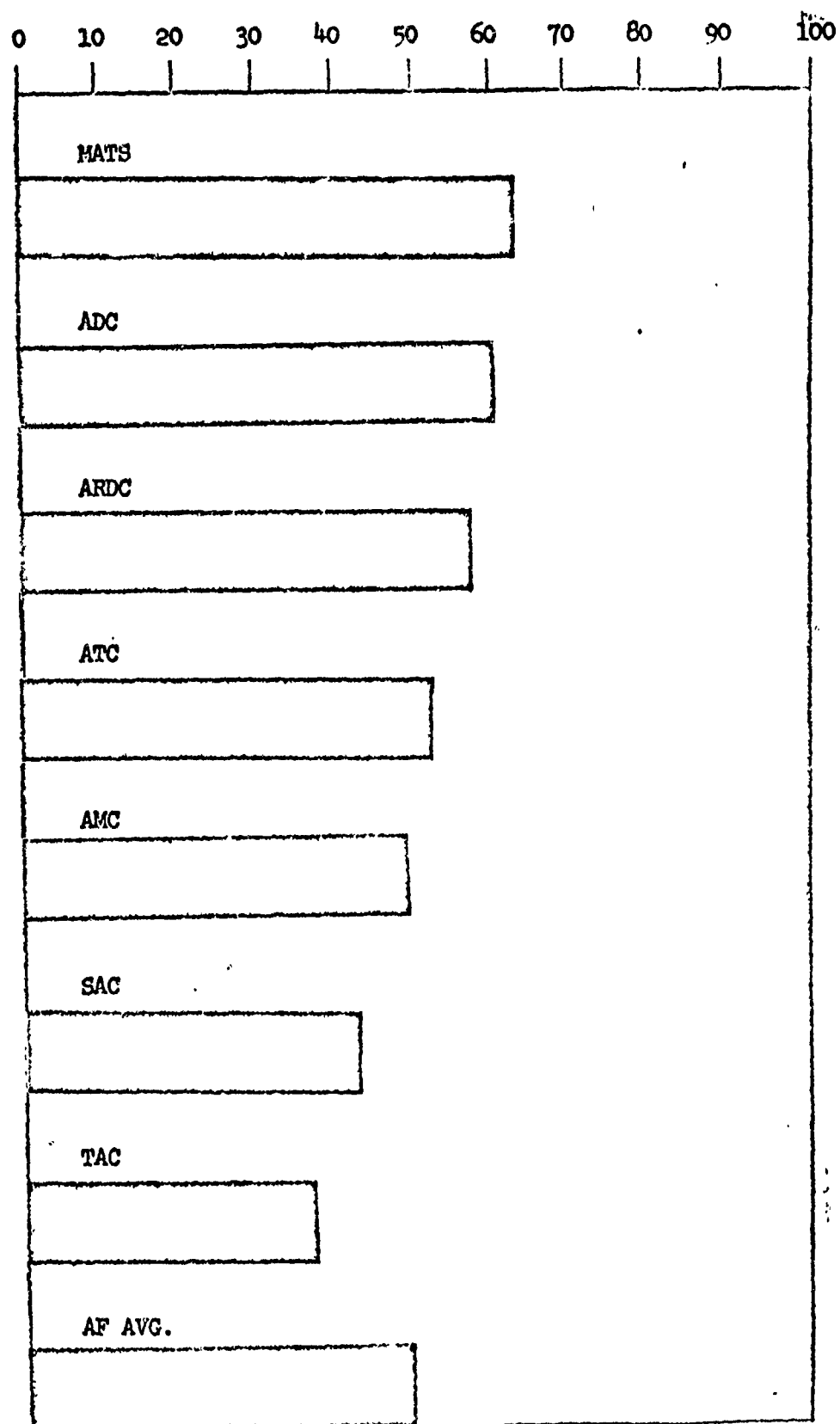


FIGURE XV  
52

# SUMMARY

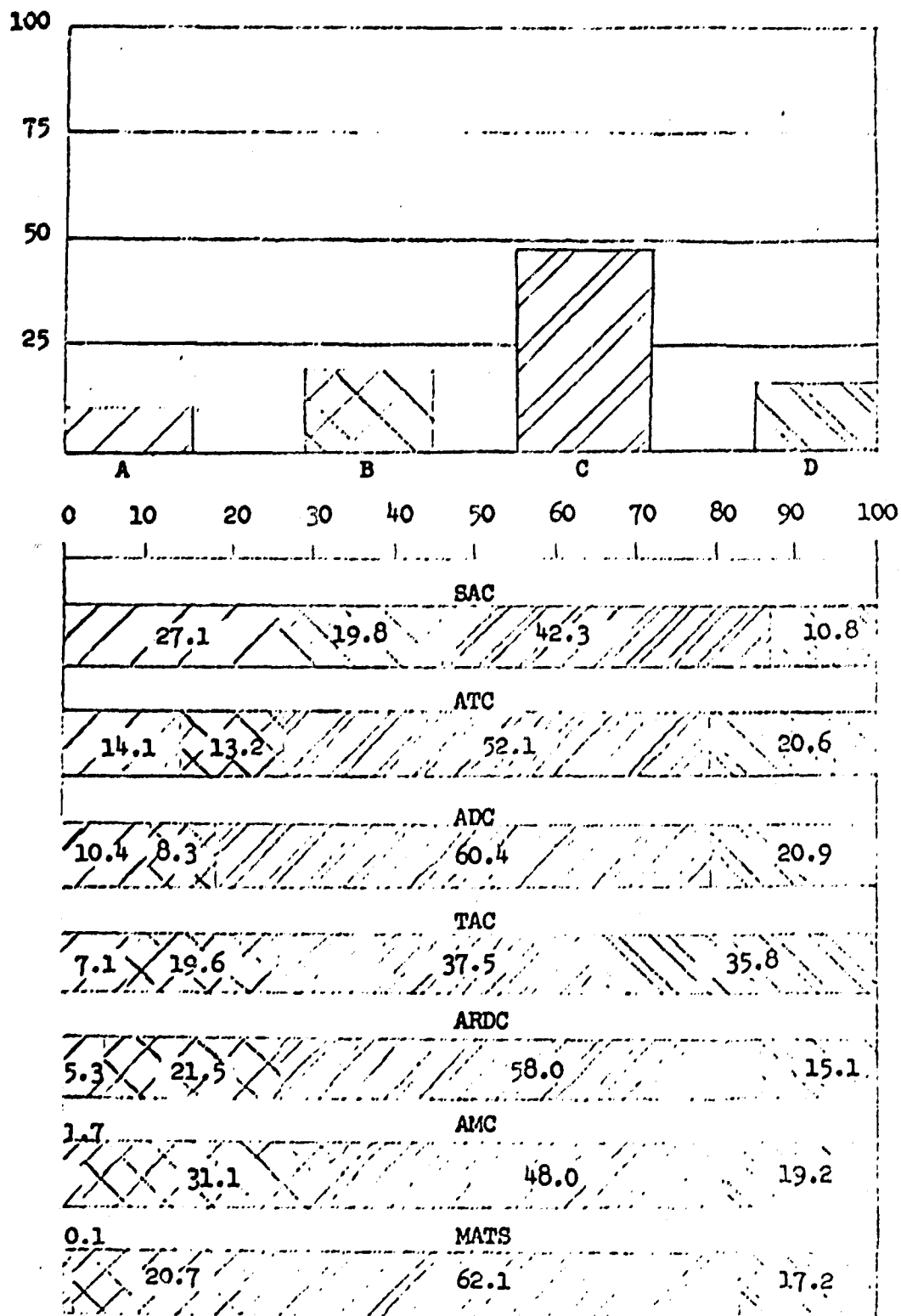


FIGURE XVI

Figure XVII indicates the number, by Command, of Categories A, B, C, and D organizations which also meet the criteria established for Category X organizations.

#### D. Opinion Survey:

Specific charts were developed for the purpose of illustrating the comparison between the nature of objectives and missions of organizations and their opinions regarding the need or usefulness of mission statements and objectives in the management of their operations.

Figure XVIII compares the number of organizations which have a written statement of their missions with the percentage of organizations which believe that their mission statement is vitally necessary, helpful, or not needed in the management of their operations. It is significant that almost all of the organizations have a written mission statement, but only 61% believe that these mission statements are vitally necessary. It is also significant that a very small percent say that they are not needed. The degree of uniformity of the distribution between Commands is apparent from the chart.

Figure XIX shows the number of organizations which have a written statement of their objectives as compared with the number of organizations which believe that such a statement of objectives is vitally necessary, helpful, or not necessary.

In comparison with the preceding chart (Figure XVIII) it should be noted that there is a considerable drop in the percent of organizations which have a written statement of their objectives compared with the percent which have written statements of their mission. A lower percentage of organizations believe that objectives of an organization are vitally necessary (50%), although a larger percent (47%) believe that written statements of objectives are helpful. The number that believe that objectives are not necessary in comparison with the number which believe that missions are necessary goes from 1% for missions to 3% for objectives. There is more difference between the Commands regarding objectives than there is regarding missions.

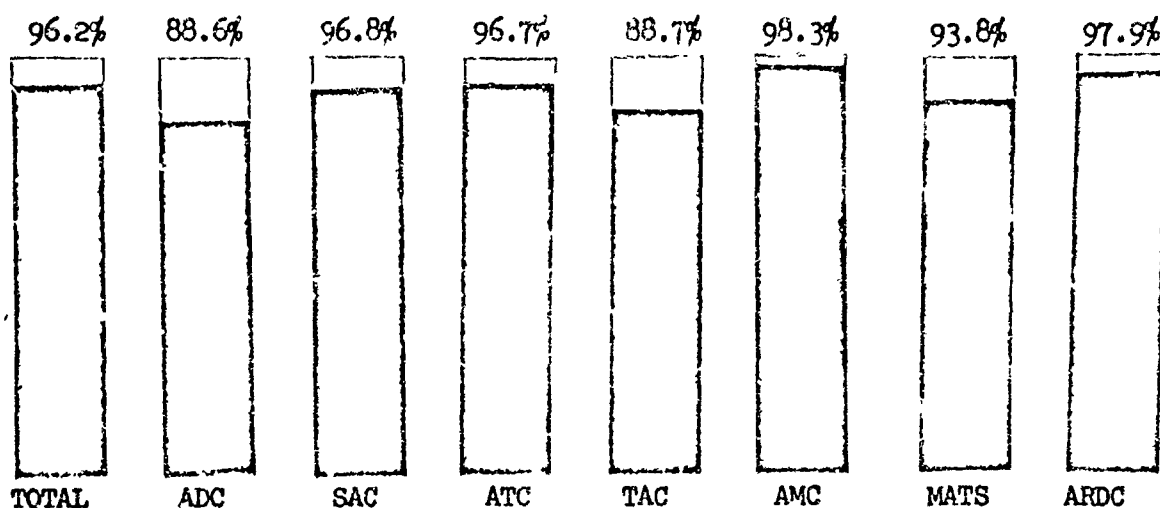
Figure XX illustrates the relationship between the percent of organizations which have a document informing them of the objectives of their next higher organization and the percent which believe that such a document is vitally necessary, helpful or not needed in the management of their operations. In general, fewer organizations believe that this document is vitally necessary than believe that mission statements and objectives are vitally necessary. A larger percent also believe that this information is not needed in the management of their operations.

Category "X" Organizations

<u>COMMAND</u>	<u>CATEGORY</u>				<u>TOTAL</u>
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	
ADC	1	1	18	3	23
SAC	12	15	19	1	47
ATC	9	11	39	1	60
TAC	2	8	16	0	26
AMC	3	50	75	10	138
MATS	0	5	14	2	21
ARDC	3	12	33	4	52
	—	—	—	—	—
TOTAL	30	102	214	21	367

FIGURE XVII

Does your organization have a written statement of its mission? (% YES)



Do you consider your mission statement to be:

- A. Vitally Necessary
- B. Helpful
- C. Not Needed

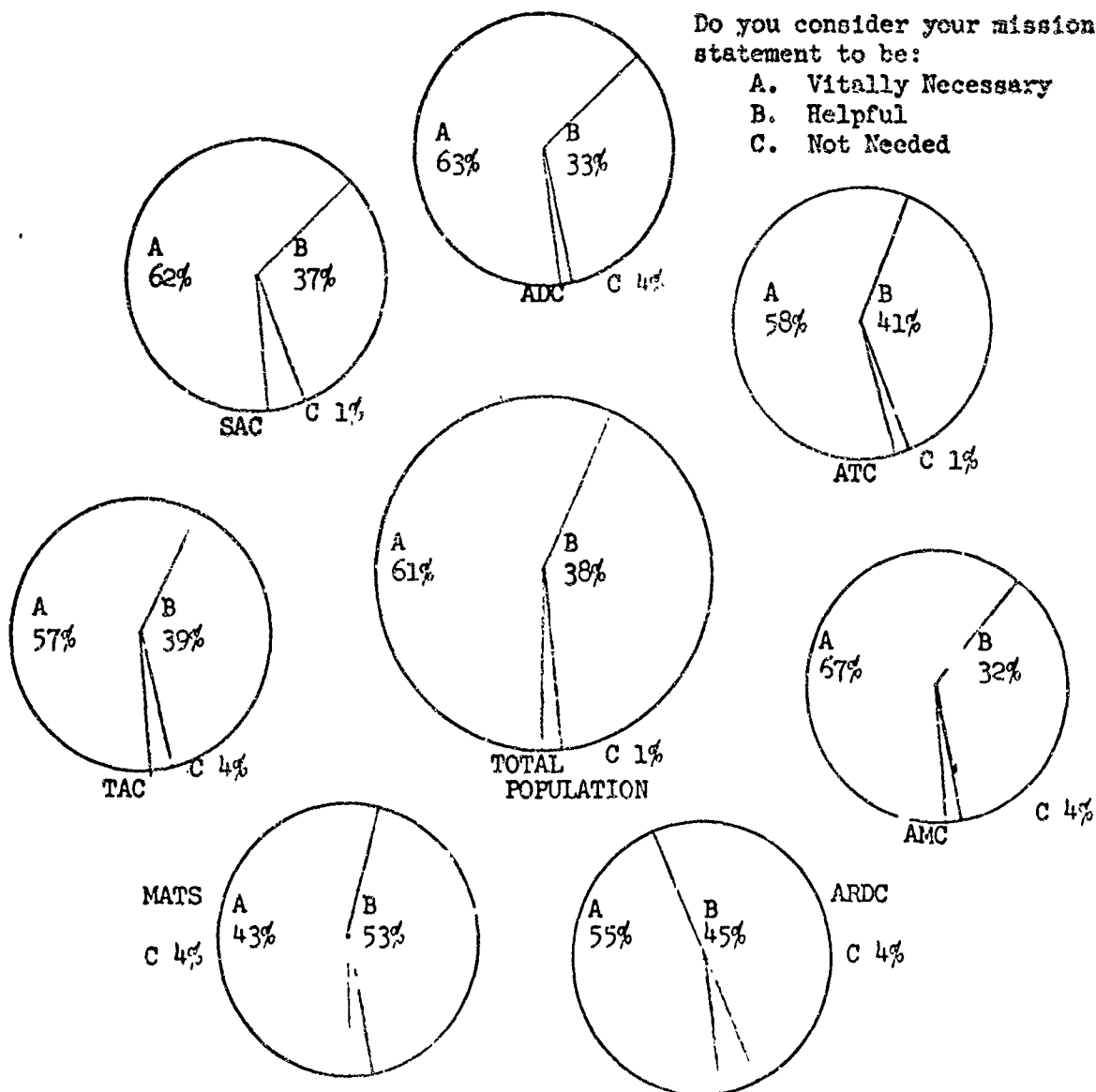
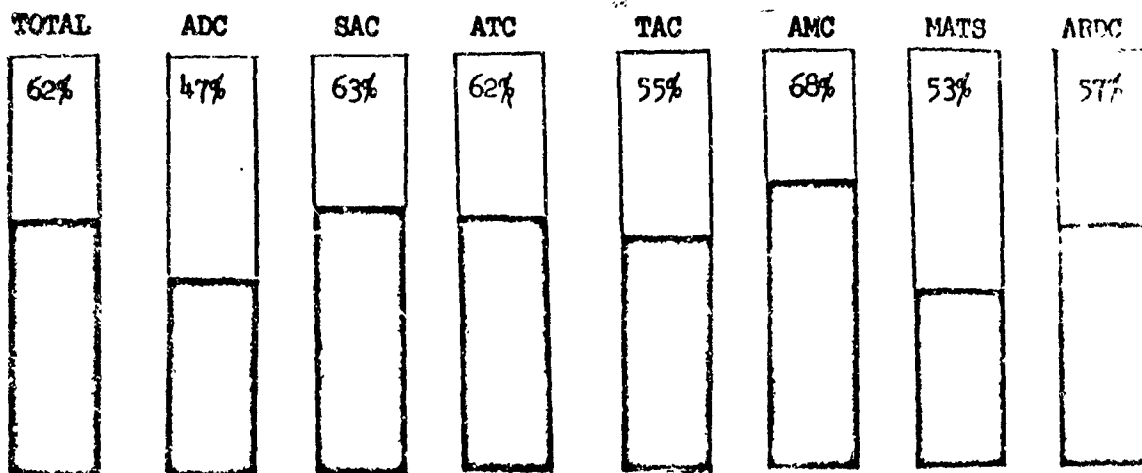


FIGURE XVIII

Do you have a written statement of the objectives of your organization?  
(% YES)



Do you believe that a written statement of objectives of your organization is:

- A. Vitally Necessary?
- B. Helpful?
- C. Not Necessary?

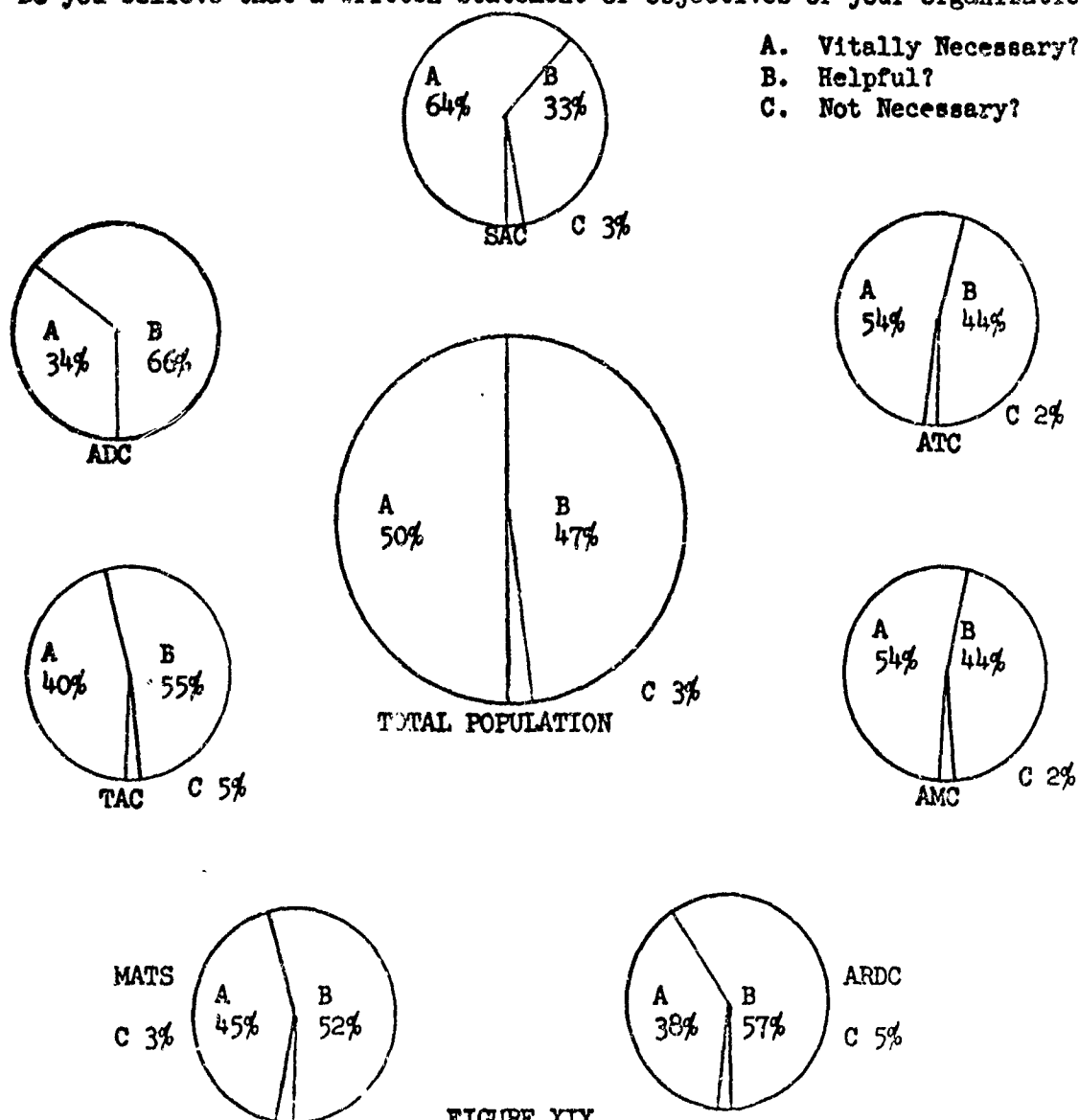
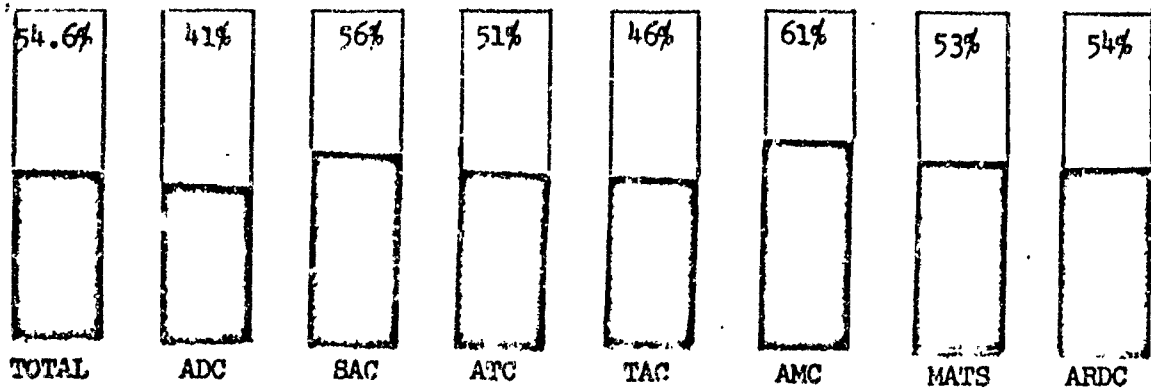


FIGURE XIX

Do you have a document informing you of the objectives of your next higher organization? (% YES)



Do you believe that this document is:

- A. Vitally Necessary?
- B. Helpful?
- C. Not Necessary?

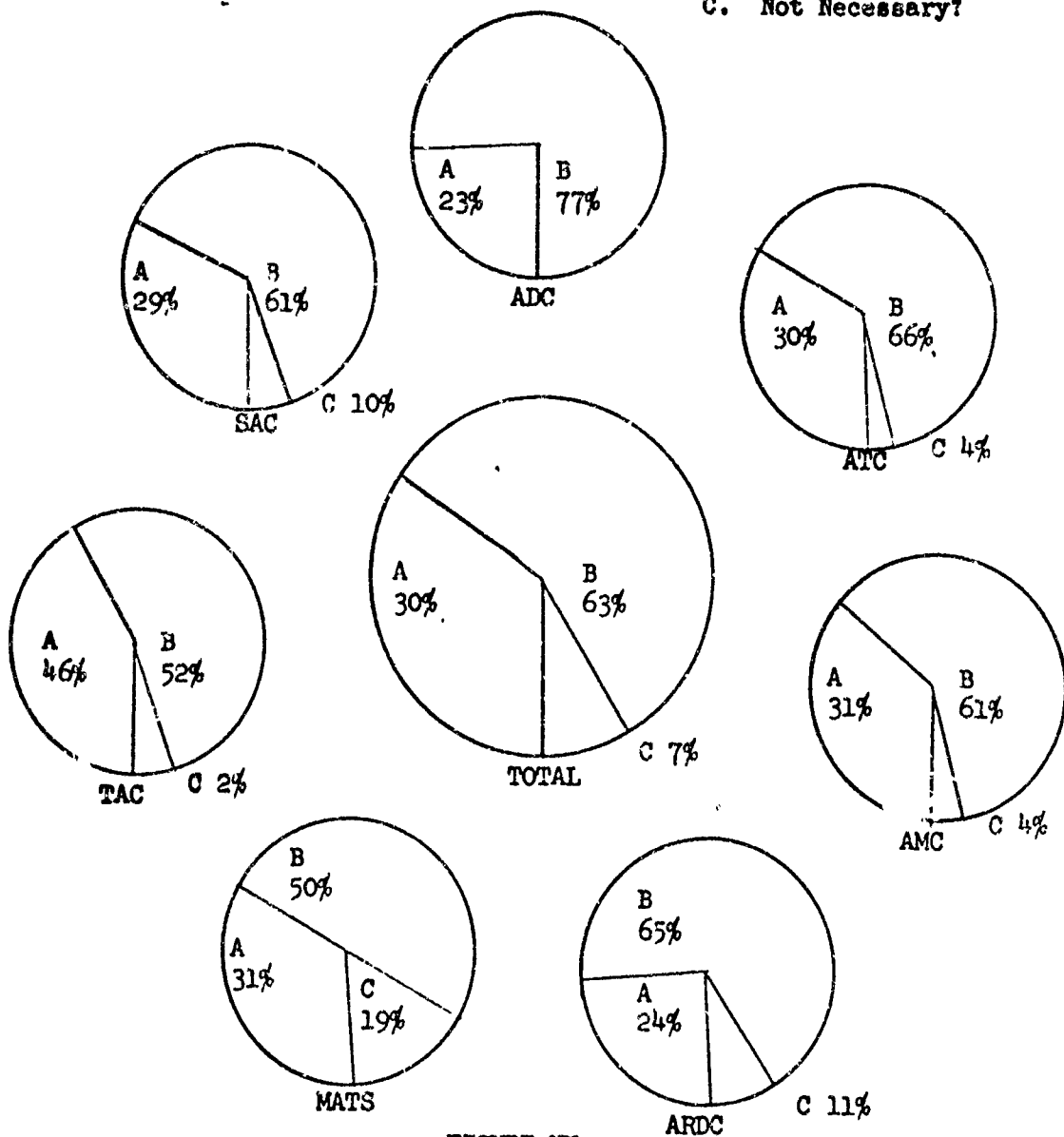


FIGURE XX

In order to determine whether or not there is any correlation between being a Category A, B, C, or D organization, and the opinion of these organizations, Category "Y" was established. This category consists of those organizations which:

- (1) Believe that mission statements are vitally necessary.
- (2) Believe that specific objectives are vitally necessary.

Figure XXI shows the number of Category A, B, C and D organizations which also qualify as Category "Y" organizations. Figure No. I shows the relationship between Category A, B, C and D organizations, Category X organizations and Category Y organizations.

#### E. General Data:

Figure XXII compares the number of organizations which prepare or approve a written statement of missions for their subordinate organizations with the number of organizations which give objectives to their subordinate organizations. The total for the population is the same in both cases. It should be noted that the Strategic Air Command, the Tactical Air Command and the Air Training Command are more objectives-minded than they are mission-minded while the Air Defense Command, Air Materiel Command, Military Air Transport Service and the Air Research and Development Command are more mission-oriented than they are objectives-oriented.

It is possible to examine the data resulting from the questionnaire with the purpose in mind of identifying the manner by which Air Force organizations receive and use their missions and objectives without respect to a specific model or theory. From this point of view it is noted that the total of Category C organizations represents 49.8% of the total organizations. (See Figure I) Category B and Category C organizations produce the highest percentages (68% and 63% respectively) of Category X organizations.

Category C organizations differ from Category A and B organizations in that they have informal objectives (not contained in a single written document given to them by higher authority) and that they obtain these informal objectives from a variety of sources. Ninety-five percent (95%) of all organizations reported that they had informal objectives. From this data it would appear that there may exist a system whereby organizations are expected to develop their objectives from various sources such as regulations, manuals, Air Force program documents, etc.

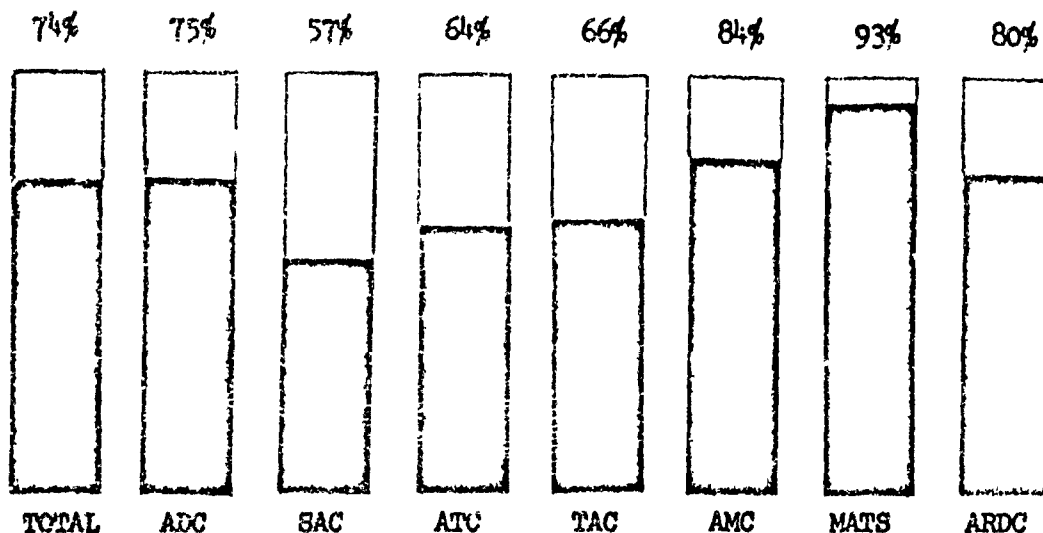


Category "Y" Organizations

<u>COMMAND</u>	<u>CATEGORY</u>				<u>TOTAL</u>
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	
ADC	0	1	8	1	10
SAC	10	9	5	1	25
ATC	3	4	15	2	24
TAC	0	2	9	0	11
AMC	3	28	24	10	65
MATS	0	1	3	0	4
ARDC	2	8	8	0	18
	---	---	---	---	---
TOTAL	18	53	72	14	157

FIGURE XXI

Do you prepare or approve written statement of missions for your subordinate organizations? (% YES)



Do you provide your subordinate organizations with a single document prepared for the specific purpose of informing them of their assigned objectives?

(% YES)

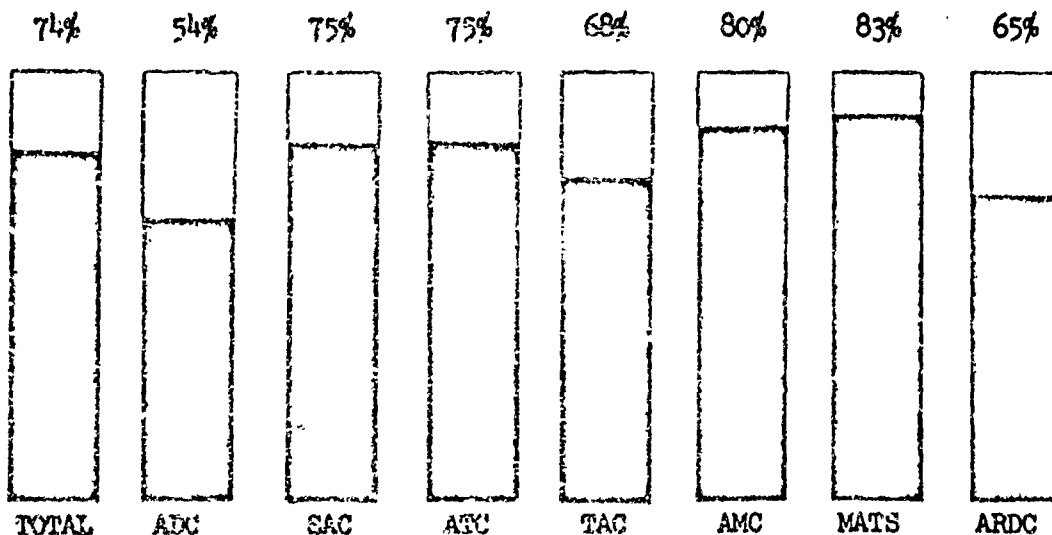


FIGURE XXII

# NOT REPRODUCIBLE

If a formal system of assigning objectives existed, it would be expected that such a system would provide for correlation of objectives assigned to separate organizational elements in order to insure the proper sequential time-phased accomplishment of the objectives in the quantity and quality desired. Air Force program documents would appear to satisfy this requirement to some degree. It would, therefore, be expected that the majority of organizations would obtain most of their informal objectives from such program documents.

Figure XXIII depicts the answers from respondents as to the source of their informal objectives. The numbers shown represent the number of organizations which reported that they obtained informal objectives from the source indicated. An organization could obtain objectives from more than one source and a majority of reporting organizations checked more than one source.

On the basis of the total figures, Regulations and Routine Correspondence are the most mentioned sources. Verbal, Manuals, and Teletypes provide the next most frequent sources in that order. Schedules, Air Force Program Documents, War Plans, and Other follow in that order as sources of informal objectives. Air Force Program Documents and War Plans are the least mentioned sources (excluding the category of Other). This pattern is generally true for each of the commands. This data indicates that Air Force program documents are not the principle source of informal objectives.

In addition to the information provided in the form of answering the questions many of the organizations returned the questionnaire with comments. A selection of comments are included as follows:

"At the present time written objectives for the field services division are included in a Depot Objectives Brochure. However, it is anticipated that we will have a Division "Written Objective" in the near future, as it is our opinion that such is of great importance to an organization of this nature."

"Unless the mission and objectives of each command and its parts are clearly outlined and revised according to changing programs and conditions, they can be a serious handicap rather than an asset."

"I consider, in the present Air Force, generally we have too many unnecessary written objectives."

"We have noted that some goals are achieved with relatively little use of management principles, chance, unexpected conditions or a turn of events causing favorable action to take place."

SOURCE OF INFORMAL OBJECTIVES

COMAND	REGULA- TIONS	MANUALS	SCHED- ULES	AF PROG- RAM DOCU- MENTS	VERBAL	WAR PLANS	ROUTINE CORRES- PONDENCE	TELE- TYPES	OTHER
TOTAL	521	461	361	299	494	295	509	120	111
ADC	36	32	25	19	34	15	40	40	14
SAC	84	75	77	32	58	69	74	85	16
ATC	92	87	74	61	91	39	87	91	25
TAC	39	34	24	34	25	39	38	19	1
MATS	18	16	9	16	19	17	19	17	5
ANC	191	163	122	103	190	96	183	164	50
ARDC	61	54	30	34	77	20	68	5	0

FIGURE XXIII

"This type of thinking is most encouraging."

"There is a definite chain which must be followed to provide adequate continuity for the work, and adequate opportunity for management by the supervisor. This chain is Mission, General Objectives, Specific Objectives, as defined above."

"In a staff organization, specific objectives are difficult to develop and are often developed to satisfy a requirement."

"I am in the process of developing a single document listing the objective of my organization from a series of other documents, notes and my own thinking."

"The mission and objectives of the Strategic Air Command are clearly understood by the dedicated career officers and airmen. ...I myself do not need written documents to tell me the purpose or objective of the SAC mission rather information on how to best do it."

"It is my opinion that inadequate attention is paid to defining a realistic, feasible mission and then establishing objectives (U.T.P.s, etc.) that will assure the ability to accomplish the mission or Cause Revision of the Equipment and/or Mission so that it can be accomplished. ...agencies seemed to be more concerned with improved performance in equipment than with achieving any better ability to accomplish the mission. ...it is clear that we must either limit and define the mission within the capabilities of the equipment, or design the equipment to perform the mission."

"The only difficulty encountered in answering your questions centered around a matter of interpretation."

Many of the organizations answering the questionnaire inclosed documentary evidence of their efforts to establish and define their missions and objectives. In general, the research group found that by far the majority of these examples contained general objectives rather than specific objectives. Some of the objectives listed are as follows:

"The attainment of war-time readiness in peace-time operations."

"Elimination of duplication of functions."

"Continual review will be made to identify and implement major management philosophies."

Some of the specific objectives furnished by the respondents were as follows:

"Prepare 2 each aircraft for transfer to IRAN schedule as follows."

"Maintain sufficient dock crews to perform scheduled periodic inspections on group assigned C-124C aircraft."

## CONCLUSIONS

## CONCLUSIONS

The group concluded, pertaining to the theoretical portion of the research work, that the attainment of the total objective of an organized effort requires the exercise of a management discipline. This management discipline requires that organizations be created only because an operation must be performed. Operations require the identification of objectives in specific terms. Since organizations must receive adequate values in return for the values they create, the resources used to produce the values can only be justified on the basis of the value (objective) created.

Assuming the correctness of the theory as interpreted into the criteria of Category A, B, C and D organizations and assuming that the sample was representative of the population, the research group concluded that only a small percentage (9.5%) of Air Force organizations are managed in terms of objectives. Approximately one-half (53%) manage their subordinate organizations by giving them specific objectives. However, since a majority (69%) of these organizations (Category C and Category D) have objectives the validity of which may be doubted, there is a question as to whether or not they are managing in the right direction.

The research group could draw no specific conclusion which would serve to explain the situation as described by the data. Efforts to correlate opinions with A, B, C and D categories of organizations failed to indicate that organizations are managed by reference to objectives because of their convictions. There was no correlation between organizations which are being managed and those which manage in terms of objectives. The group could find no evidence of uniformity of data which would indicate the existence of a formal system of providing and correlating objectives.

Air Force Manual 25-1, September 1954 states:

"It is necessary that all levels of command ascertain that their expenditures of effort contribute directly to this over-all objective."

We appear to have enough principles. What is needed are techniques for getting this done.

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## RECOMMENDATIONS

## RECOMMENDATIONS

Based on the findings and conclusions contained in this report the research group recommends the following:

a. Headquarters USAF and Major Air Commands stress the need for quantified objectives to their various management levels by:

- (1) Institution of an educational program to acquaint their management personnel with this highly important yet basic fundamental responsibility.
- (2) Establishing a review of their existing practices and where necessary make it mandatory that each level of management quantify the objectives for its subordinates.
- (3) Establish the necessary controls to insure the compliance with the program of management by objectives.

b. That Headquarters USAF, Air University and Air Force Institute of Technology establish a research project to further develop an Air Force concept of management in terms of specific objectives.

c. The Air University and the USAF Institute of Technology stress the importance of specific objectives and the management responsibilities for quantification of objectives in all its educational courses on management.

d. The AF Inspector General make the subject of "Management by Objectives" a prime area of review to insure that expenditures of efforts do contribute to the over-all objective.

These foregoing recommendations are based on the belief that the theory of "Management by Objectives" is both logical and practical. Quantification of objectives is a basic responsibility of management and the higher the level of management at which the quantification is accomplished the greater will be the probability that the real objectives will be attained with the least probability of wasting resources.

In the opinion of the research group this quantification process is not easily accomplished. It is difficult and might appear, at times, to be virtually impossible but it can be done. Throughout the Air Force large sums of money have been expended to insure that the direct worker, the man in the repair depot, the man on the line, and the man in the warehouse is carefully supervised and has performance, time and effectiveness standards. These same efforts are also finitely costed by standard cost systems, inventory cost systems, materials and labor accounting systems. In the total aggregate of Air Force operations this applies principally to the direct worker. This is not to be construed as a criticism but as a basis for comparison with the apparent laxity of management of indirect efforts. The continued growth of overhead, supporting, servicing and staff costs and operations make it mandatory that the Air Force insures that the objectives of these overhead organizations are as specific as those of the direct worker and that the operations of these organizations produce results which do contribute to the total Air Force objective.

## APPENDIX

# NOT REPRODUCIBLE

## DEFINITIONS

### A. Mission.

Mission statements describe the activities assigned to an organization. They serve to identify a specific group with its activities as contrasted with the activities assigned to another group. Mission statements are characterized by their identity and coexistence with organizational elements; they describe the group of continuing activities which are assigned to the organization element. They prescribe activities to be performed without any relation to the quantity or time-phasing of specific activities. Such statements as:

"To administer programs"  
"To promote the sale of"  
"To distribute"  
"To procure"

are examples of mission statements. Such statements, by themselves, do not provide a basis for managing the operations of the organization. Until these activities are applied in some manner, the opportunity or necessity for management does not exist. This can be better understood if a manufacturing organization is considered. The production organization is assigned the production mission. Planning for production, organizing for production, directing production activities, coordinating production elements and controlling the entire process cannot be accomplished without identifying the item(s) to be produced and the quantity per unit time desired. It is not possible to determine the resources required, i.e., the men, machines, materials, etc., needed using the mission statement alone.

### B. Objectives.

An objective is a goal or aim toward which the activities (mission) and efforts of an organization are directed. Objectives can be stated in general terms or they may be specific. For the purpose of this questionnaire, objectives are classified as either General or Specific.

1. General Objectives: These are objectives stated in broad statements of desired goals or accomplishments. They may represent what management at any level considers to be desired performance. Such objectives may be stated as follows:

- a. To insure timely and adequate maintenance and supply support of all combat units.
- b. To improve the reliability and ease of maintenance of Air Force equipment.
- c. To promote career training and progression of assigned personnel.

2. Specific objectives: These are objectives which are stated in terms of time, quantity and quality values and provide a basis which permits an activity to compute requirements for the resources necessary to attain the objectives. They also provide a basis for managing operations and furnish criteria against which the performance of an activity may be measured. Such objectives might be stated as follows:

- a. To maintain a level of 85% or more in-commission status of all assigned B-52 aircraft during CY 1957.
- b. To overhaul and prepare for overseas airlift 250 J-57 engines during March 1957.
- c. To process all high priority supply requests within twenty-four hours after receipt. (Provided the quantity "all" can be identified in quantitative terms.)

3. Sub-Objective: A portion, division or segment of a basic objective which can be directly traceable to the basic objective.

4. Derived Objective: An objective generated, devised or developed which may or may not support a basic objective but cannot be traced or directly attributed to a basic objective.

5. Plan - Characteristics of: An objective statement of time-phased tasks to be accomplished with a definite assignment of tasks and a method of achieving the plan.

6. Plan: The present concept of a series of future events either concurrent, sequential or both, possessing a presently acceptable probability of producing the desired objective.

7. Model: A pictorial portrayal of a system, operation, management, organization, function, data flow, etc., utilized to describe or define basic elements of activity inherent in the subject of study, investigation or research. A model can depict either that which is in being or transpiring or that which is being proposed as new.

8. Organization: The design of a pattern of functions and people to assure accomplishment of predetermined objectives.  
(Dr. M. E. Mundel)

9. Management:

- a. The application of logical and effective thinking to the solution of business problems applying the business knowledge and principles accumulated, classified, codified and accepted to date.  
(R. C. Davis, p. 6, "The Fundamentals of Top Management")
- b. The task of designing, predicting the performance of, and controlling an integrated human group activity, the related physical facilities and the relationship between the two. (Dr. M. E. Mundel)
- c. That part of administration concerned with the procedure, techniques and processes employed in an operation; the persons concerned with these procedures, etc. (USAF Dictionary)

10. Organization: The art of collecting, arranging, classifying and grouping of all resources available in order to accomplish efficiently a clearly defined, unified objective.  
(J. G. Blover and C. L. Maze, p. 23, "Managerial Control")

11. Functions: The individual roles or duties to be performed by a specific group or unit within an organization and when these assigned functions are performed the individual group or unit can then be considered as performing its mission.  
(USAF Dictionary)

QUESTIONNAIRE  
SECTION II  
MISSION

---

1. Does your organization have a written statement of its MISSION?

GRAND TOTAL	702 Yes	28 No
ADC	46	6
SAC	122	4
ATRC	118	4
TAC	53	6
AMC	239	4
MATS	30	2
ARDC	94	2

---

2. Was your MISSION statement:

- G T a. (310) Given to your organization by higher authority?  
R O b. (145) Developed by your organization but approved by higher  
A T authority?  
N A c. (205) Developed by your organization based on documents or  
D L or data provided by higher authority?  
d. ( 21) Developed by your organization on their own initiative?

ADC	a. 46	b. 7	c. 10	d. 2
SAC	a. 87	b. 10	c. 23	d. 1
ATRC	a. 57	b. 19	c. 40	d. 4
TAC	a. 31	b. 11	c. 9	d. 2
AMC	a. 63	b. 68	c. 102	d. 4
MATS	a. 12	b. 12	c. 5	d. 1
ARDC	a. 33	b. 38	c. 16	d. 7

---

3. Do you periodically revise or cause your MISSION statement to be revised?

GRAND TOTAL	463 Yes	238 No
ADC	31	15
SAC	54	68
ATRC	64	54
TAC	28	25
AMC	191	47
MATS	19	11
ARDC	76	18

---



4. Do you consider your MISSION statement to be:  
 G T a. (431) Vitally necessary?  
 R O b. (268) Helpful?  
 A T c. ( 9) Not necessary?  
 N A  
 D L

ADC	a.	29	b.	15	c.	2
SAC	a.	75	b.	44	c.	1
ATRC	a.	67	b.	48	c.	1
TAC	a.	30	b.	21	c.	2
AMC	a.	161	b.	79	c.	3
MATS	a.	13	b.	16	c.	1
ARDC	a.	52	b.	42	c.	0

5. Do you prepare or approve written statement of MISSIONS for your subordinate activities?

GRAND TOTAL	517 Yes	185 No
ADC	39	13
SAC	69	53
ATRC	76	43
TAC	37	19
AMC	195	37
MATS	27	2
ARDC	74	18

6. Do you periodically revise the MISSION statements of your subordinate activities?

GRAND TOTAL	479 Yes	224 No
ADC	33	18
SAC	64	57
ATRC	68	51
TAC	35	22
AMC	180	49
MATS	26	4
ARDC	73	23

### SECTION III

#### PART I

#### WRITTEN OBJECTIVES

1. Does your organization have a SINGLE DOCUMENT prepared for the specific purpose of listing the OBJECTIVES of your organization?

1. (cont)

GRAND TOTAL	447 Yes	26 No
ADC	24	27
SAC	79	47
ATRC	75	46
TAC	32	26
AMC	162	81
MATS	17	15
ARDC	55	41

2. Was this document:

G T a. Given to your organization by higher authority? (146)  
R O b. Developed by your organization but approved by higher authority? (126)  
A T c. Developed by your organization based on documents or data provided  
N A by higher authority? (126)  
D L d. Developed by your organization on their own initiative? (46)

ADC	a. 12	b. 1	c. 6	d. 5
SAC	a. 49	b. 8	c. 17	d. 5
ATRC	a. 38	b. 13	c. 22	d. 2
TAC	a. 10	b. 12	c. 7	d. 3
AMC	a. 16	b. 61	c. 59	d. 21
MATS	a. 2	b. 6	c. 4	d. 5
ARDC	a. 17	b. 24	c. 9	d. 5

3. Is this document distributed to your subordinate organizations?

GRAND TOTAL	390 Yes	48 No
ADC	22	2
SAC	77	6
ATRC	69	5
TAC	26	7
AMC	137	18
MATS	15	2
ARDC	44	8

4. Of all the OBJECTIVES listed in this document would you say that:

G T a. (42) all of  
R O b. (67) most of  
A T c. (44) few of  
N A d. (9) none of  
D L then are GENERAL in nature?

ADC	a. 9	b. 11	c. 4	d. 0
SAC	a. 12	b. 33	c. 30	d. 8
ATRC	a. 30	b. 35	c. 8	d. 2
TAC	a. 9	b. 13	c. 7	d. 3
AMC	a. 42	b. 67	c. 44	d. 9
MATS	a. 5	b. 8	c. 4	d. 0
ARDC	a. 17	b. 30	c. 6	d. 2

5. If there are GENERAL OBJECTIVES listed in this document would you say that:

- G T a. (1) All 97 (2) Most 97 (3) Few 72 (4) None 0, of them were  
R O given to you by higher authority?  
A T b. (1) All 32 (2) Most 70 (3) Few 88 (4) None 0, of them were  
N A developed by your organization but approved by higher authority?  
D L c. (1) All 12 (2) Most 60 (3) Few 119 (4) None 0, of them were  
developed by your organization from documents or data provided by  
higher authority?  
d. (1) All 7 (2) Most 21 (3) Few 119 (4) None 0, of them were  
developed by your organization on their own initiative.

ADC	a.(1)	6	(2)	8	(3)	1	(4)	0
	b.(1)	0	(2)	2	(3)	5	(4)	0
	c.(1)	2	(2)	7	(3)	5	(4)	0
	d.(1)	0	(2)	0	(3)	8	(4)	0
SAC	a.(1)	34	(2)	17	(3)	10	(4)	0
	b.(1)	0	(2)	6	(3)	17	(4)	0
	c.(1)	0	(2)	10	(3)	17	(4)	0
	d.(1)	0	(2)	2	(3)	16	(4)	0
ATRC	a.(1)	30	(2)	21	(3)	5	(4)	0
	b.(1)	6	(2)	6	(3)	16	(4)	0
	c.(1)	2	(2)	7	(3)	18	(4)	0
	d.(1)	0	(2)	1	(3)	19	(4)	0
TAC	a.(1)	8	(2)	9	(3)	3	(4)	0
	b.(1)	3	(2)	7	(3)	7	(4)	0
	c.(1)	0	(2)	0	(3)	10	(4)	0
	d.(1)	0	(2)	0	(3)	10	(4)	0
AMC	a.(1)	11	(2)	28	(3)	35	(4)	0
	b.(1)	19	(2)	32	(3)	31	(4)	0
	c.(1)	6	(2)	27	(3)	47	(4)	0
	d.(1)	6	(2)	10	(3)	47	(4)	0
MATS	a.(1)	1	(2)	4	(3)	6	(4)	0
	b.(1)	0	(2)	4	(3)	3	(4)	0
	c.(1)	1	(2)	3	(3)	6	(4)	0
	d.(1)	0	(2)	3	(3)	6	(4)	0
ARLC	a.(1)	8	(2)	12	(3)	13	(4)	0
	b.(1)	4	(2)	14	(3)	10	(4)	0
	c.(1)	1	(2)	7	(3)	18	(4)	0

6. If there are SPECIFIC OBJECTIVES listed in this document would you say that:

- G T a. (1) All 50 (2) Most 62 (3) Few 60 (4) None 0, of them were given  
R O to you by higher authority?  
A T b. (1) All 18 (2) Most 59 (3) Few 55 (4) None 0, of them were devel-  
N A oped by your organization but approved by higher authority?  
D L c. (1) All 13 (2) Most 49 (3) Few 86 (4) None 0, of them were devel-  
oped by your organization from documents of data provided by higher  
authority?

d. (1) All 14 (2) Most 29 (3) Few 94 (4) None 0, of them were developed by your organization on own initiative?

ADC	a.(1)	1	(2)	3	(3)	5	(4)	0
	b.(1)	0	(2)	2	(3)	4	(4)	0
	c.(1)	3	(2)	4	(3)	5	(4)	0
	d.(1)	0	(2)	2	(3)	9	(4)	0
SAC	a.(1)	19	(2)	19	(3)	7	(4)	0
	b.(1)	0	(2)	6	(3)	15	(4)	0
	c.(1)	1	(2)	11	(3)	13	(4)	0
	d.(1)	1	(2)	4	(3)	15	(4)	0
ATRC	a.(1)	13	(2)	14	(3)	7	(4)	0
	b.(1)	0	(2)	5	(3)	13	(4)	0
	c.(1)	1	(2)	6	(3)	17	(4)	0
	d.(1)	0	(2)	2	(3)	20	(4)	0
TAC	a.(1)	5	(2)	5	(3)	6	(4)	0
	b.(1)	2	(2)	9	(3)	2	(4)	0
	c.(1)	0	(2)	1	(3)	9	(4)	0
	d.(1)	0	(2)	1	(3)	9	(4)	0
AMC	a.(1)	5	(2)	13	(3)	31	(4)	0
	b.(1)	14	(2)	27	(3)	14	(4)	0
	c.(1)	5	(2)	22	(3)	33	(4)	0
	d.(1)	10	(2)	15	(3)	34	(4)	0
MATS	a.(1)	2	(2)	1	(3)	3	(4)	0
	b.(1)	1	(2)	3	(3)	1	(4)	0
	c.(1)	1	(2)	4	(3)	1	(4)	0
	d.(1)	1	(2)	2	(3)	1	(4)	0
ARDC	a.(1)	5	(2)	7	(3)	4	(4)	0
	b.(1)	1	(2)	8	(3)	5	(4)	0
	c.(1)	2	(2)	1	(3)	9	(4)	0
	d.(1)	2	(2)	5	(3)	8	(4)	0

7. If this document contains SPECIFIC OBJECTIVES (See definition) do you use them in any way to compute the resources required to accomplish these OBJECTIVES:

GRAND TOTAL	279 Yes	35 No
ADC	14	2
SAC	62	7
ATRC	40	3
TAC	21	2
AMC	102	16
MATS	10	3
ARDC	30	2

8. If this document contains SPECIFIC OBJECTIVES do you use them in computing your budget?

8. (cont)

GRAND TOTAL	237 Yes	77 No
ADC	13	3
SAC	47	20
ATRC	35	7
TAC	20	4
AMC	88	30
MATS	9	4
ARDC	25	9

9. Does your higher authority use:

- G T a. (216) All of the GENERAL OBJECTIVES  
 R O b. (139) Part of the GENERAL OBJECTIVES  
 A T c. (14) None of the GENERAL OBJECTIVES  
 N A d. (131) All of the SPECIFIC OBJECTIVES  
 D L e. (94) Part of the SPECIFIC OBJECTIVES  
 f. (11) None of the SPECIFIC OBJECTIVES  
 to measure the progress of your organization?

ADC	a. 10	b. 9	c. 2	d. 22	e. 6	f. 4
SAC	a. 48	b. 27	c. 0	d. 41	e. 18	f. 0
ATRC	a. 39	b. 22	c. 1	d. 15	e. 15	f. 1
TAC	a. 16	b. 11	c. 0	d. 13	e. 2	f. 0
AMC	a. 74	b. 53	c. 4	d. 52	e. 43	f. 3
MATS	a. 10	b. 2	c. 4	d. 3	e. 5	f. 2
ARDC	a. 26	b. 20	c. 3	d. 9	e. 9	f. 1

10. Do you provide your subordinate organizations with a SINGLE DOCUMENT prepared for the specific purpose of informing them of their assigned OBJECTIVES?

GRAND TOTAL	323 Yes	112 No
ADC	14	12
SAC	62	21
ATRC	58	19
TAC	21	10
AMC	119	29
MATS	15	3
ARDC	34	18

11. Are the OBJECTIVES in these documents which you give to your subordinate organizations:

- G T a. (64) All GENERAL OBJECTIVES?  
 R O b. (38) All SPECIFIC OBJECTIVES?  
 A T c. (70) Mostly GENERAL?  
 N A d. (87) Mostly SPECIFIC?  
 D L e. (94) About half SPECIFIC and half GENERAL?

11. (cont)

ADC	a.	4	b.	0	c.	6	d.	2	e.	7
SAC	a.	5	b.	18	c.	8	d.	23	e.	21
ATRC	a.	15	b.	7	c.	19	d.	10	e.	13
TAC	a.	4	b.	1	c.	4	d.	12	e.	3
AMC	a.	26	b.	9	c.	24	d.	34	e.	42
MATS	a.	6	b.	1	c.	3	d.	2	e.	5
ARDC	a.	8	b.	3	c.	11	d.	8	e.	11

12. Do you use:

G T a. (223) All of  
 R O b. (114) Part of  
 A T c. ( 10) None of  
 N A the objectives referred to in Question No. 11 to measure the progress  
 D L of your subordinate organizations?

ADC	a.	7	b.	11	c.	0
SAC	a.	38	b.	7	c.	1
ATRC	a.	35	b.	27	c.	3
TAC	a.	15	b.	9	c.	0
AMC	a.	90	b.	41	c.	4
MATS	a.	12	b.	5	c.	0
ARDC	a.	26	b.	14	c.	2

SECTION III  
 PART II  
 INFORMAL OBJECTIVES

1. Does your organization have informal OBJECTIVES which are not contained in your written statement of OBJECTIVES? (Ref. Section III, Part I, Q. 1)

GRAND TOTAL	690 Yes	40 No
ADC	50	0
SAC	116	10
ATRC	116	8
TAC	53	6
AMC	234	8
MATS	31	0
ARLC	89	7

2. If the answer to question 1 is Yes in what form are they recieved by your organization?

G T a. (521) Regulations  
 R O b. (461) Manuals  
 A T  
 N A  
 D L

2. (cont)

- c. (361) Schedules
- d. (299) AF Program Documents
- e. (494) Verbal
- f. (295) War Plans
- g. (509) Routine Correspondence
- h. (420) Teletypes
- i. (111) Other (Specify)

ADC	a.	36	b.	32	c.	25	d.	19	e.	34	f.	15	g.	40
SAC	a.	84	b.	75	c.	77	d.	32	e.	58	f.	69	g.	74
ATRC	a.	92	b.	87	c.	74	d.	61	e.	91	f.	39	g.	87
TAC	a.	39	b.	34	c.	24	d.	34	e.	25	f.	39	g.	38
AMC	a.	191	b.	163	c.	122	d.	103	e.	190	f.	96	g.	183
MATS	a.	18	b.	16	c.	9	d.	16	e.	19	f.	17	g.	19
ARDC	a.	61	b.	54	c.	30	d.	34	e.	77	f.	20	g.	63

ADC	h.	40	i.	14
SAC	h.	85	i.	16
ATRC	h.	91	i.	25
TAC	h.	18	i.	1
AMC	h.	164	i.	50
MATS	h.	17	i.	5
ARDC	h.	5	i.	0

3. Are these informal OBJECTIVES distributed in any form to your subordinate organizations?

	645 Yes	23 No
GRAND TOTAL		
ADC	48	1
SAC	115	1
ATRC	111	2
TAC	49	2
AMC	210	11
MATS	30	1
ARDC	82	5

4. Of all informal OBJECTIVES you have, would you say that:

- G T a. (19) All of
- R O b. (317) Most of
- A T c. (331) Few of
- N A d. (22) None of
- D L them are GENERAL in nature.

ADC	a.	1	b.	24	c.	25	d.	0
SAC	a.	2	b.	32	c.	79	d.	4
ATRC	a.	4	b.	51	c.	58	d.	1
TAC	a.	3	b.	25	c.	25	d.	0
AMC	a.	7	b.	117	c.	99	d.	11
MATS	a.	0	b.	19	c.	11	d.	1
ARDC	a.	2	b.	49	c.	34	d.	5

5. If you have informal GENERAL OBJECTIVES would you say that:
- G T a. (1) All 2 (2) Most 310 (3) Few 153 (4) None 0, of them were  
R O given to you by higher authority?
- A T b. (1) All 2 (2) Most 63 (3) Few 253 (4) None 0, of them were  
N A developed by your organization but approved by higher authority?
- D L c. (1) All 4 (2) Most 101 (3) Few 289 (4) None 0, of them were  
developed by your organization from documents or data provided by higher  
authority?
- d. (1) All 10 (2) Most 59 (3) Few 317 (4) None 0, of them were  
developed by your organization on their own initiative?

ADC	a.(1)	4	(2)	27	(3)	12	(4)	0
	b.(1)	0	(2)	8	(3)	23	(4)	0
	c.(1)	0	(2)	7	(3)	26	(4)	0
	d.(1)	0	(2)	3	(3)	28	(4)	0
SAC	a.(1)	3	(2)	60	(3)	20	(4)	0
	b.(1)	0	(2)	11	(3)	41	(4)	0
	c.(1)	1	(2)	12	(3)	50	(4)	0
	d.(1)	0	(2)	6	(3)	54	(4)	0
ATRC	a.(1)	4	(2)	55	(3)	25	(4)	0
	b.(1)	0	(2)	11	(3)	44	(4)	0
	c.(1)	1	(2)	14	(3)	52	(4)	0
	d.(1)	1	(2)	7	(3)	61	(4)	0
TAC	a.(1)	7	(2)	27	(3)	5	(4)	0
	b.(1)	0	(2)	1	(3)	17	(4)	0
	c.(1)	0	(2)	10	(3)	15	(4)	0
	d.(1)	1	(2)	3	(3)	19	(4)	0
AMC	a.(1)	6	(2)	94	(3)	54	(4)	0
	b.(1)	2	(2)	20	(3)	85	(4)	0
	c.(1)	2	(2)	41	(3)	100	(4)	0
	d.(1)	4	(2)	24	(3)	108	(4)	0
MATS	a.(1)	0	(2)	9	(3)	11	(4)	0
	b.(1)	0	(2)	3	(3)	13	(4)	0
	c.(1)	0	(2)	6	(3)	12	(4)	0
	d.(1)	2	(2)	4	(3)	10	(4)	0
ARDC	a.(1)	2	(2)	39	(3)	28	(4)	0
	b.(1)	0	(2)	11	(3)	31	(4)	0
	c.(1)	0	(2)	11	(3)	36	(4)	0
	d.(1)	2	(2)	12	(3)	39	(4)	0

6. If you have informal SPECIFIC OBJECTIVES would you say that:
- G T a. (1) All 21 (2) Most 231 (3) Few 213 (4) None 0, of them were  
R O given to you by higher authority?
- A T b. (1) All 13 (2) Most 81 (3) Few 224 (4) None 0, of them were  
N A developed by your organization but approved by higher authority?
- D L c. (1) All 10 (2) Most 122 (3) Few 272 (4) None 0, of them were  
developed by your organization from documents or data provided by higher  
authority?
- d. (1) All 8 (2) Most 101 (3) Few 297 (4) None 0, of them were  
developed by your organization on their own initiative?



ADC	a.(1)	0	(2)	21	(3)	18	(4)	0
	b.(1)	1	(2)	5	(3)	24	(4)	0
	c.(1)	0	(2)	13	(3)	22	(4)	0
	d.(1)	1	(2)	6	(3)	27	(4)	0
SAC	a.(1)	5	(2)	53	(3)	26	(4)	0
	b.(1)	1	(2)	10	(3)	40	(4)	0
	c.(1)	0	(2)	21	(3)	47	(4)	0
	d.(1)	0	(2)	9	(3)	55	(4)	0
ATRC	a.(1)	4	(2)	48	(3)	33	(4)	0
	b.(1)	2	(2)	14	(3)	41	(4)	0
	c.(1)	5	(2)	17	(3)	45	(4)	0
	d.(1)	2	(2)	17	(3)	51	(4)	0
TAC	a.(1)	4	(2)	15	(3)	14	(4)	0
	b.(1)	2	(2)	4	(3)	15	(4)	0
	c.(1)	0	(2)	8	(3)	17	(4)	0
	d.(1)	0	(2)	6	(3)	18	(4)	0
AMC	a.(1)	4	(2)	58	(3)	82	(4)	0
	b.(1)	6	(2)	37	(3)	67	(4)	0
	c.(1)	4	(2)	42	(3)	98	(4)	0
	d.(1)	3	(2)	38	(3)	98	(4)	0
MATS	a.(1)	1	(2)	9	(3)	13	(4)	0
	b.(1)	0	(2)	2	(3)	12	(4)	0
	c.(1)	1	(2)	3	(3)	12	(4)	0
	d.(1)	0	(2)	8	(3)	9	(4)	0
ARDC	a.(1)	3	(2)	29	(3)	33	(4)	0
	b.(1)	1	(2)	9	(3)	28	(4)	0
	c.(1)	0	(2)	19	(3)	32	(4)	0
	d.(1)	2	(2)	17	(3)	41	(4)	0

7. If you have informal SPECIFIC OBJECTIVES so you use them in any way to compute the resources required to accomplish these OBJECTIVES?

GRAND TOTAL	595	Yes	62	No
ADC	46		3	
SAC	101		11	
ATRC	96		14	
TAC	48		1	
AMC	196		26	
MATS	29		2	
ARDC	74		5	

8. If you have SPECIFIC OBJECTIVES do you use them in computing your budget?

GRAND TOTAL	457	Yes	66	No	140	Not Applicable
ADC	39		2		7	
SAC	59		14		43	
ATRC	84		10		15	
TAC	39		1		11	
AMC	160		27		36	

8.: (cont)

MATS	23	1	7
ARDC	55	11	21

9.. Are any of these OBJECTIVES used by higher authority to measure the progress of your organization?

G T	a.	(164)	All of the GENERAL OBJECTIVES.
R O	b.	(345)	Part of the GENERAL OBJECTIVES.
A T	c.	( 47)	None of the GENERAL OBJECTIVES.
N A	d.	(199)	All of the SPECIFIC OBJECTIVES.
D L	e.	(339)	Part of the SPECIFIC OBJECTIVES.
	f.	( 51)	None of the SPECIFIC OBJECTIVES.

ADC	a.	11	b.	28	c.	3	d.	11	e.	25	f.	5
SAC	a.	31	b.	66	c.	2	d.	42	e.	57	f.	4
ATRC	a.	35	b.	58	c.	6	d.	30	e.	61	f.	4
TAC	a.	18	b.	24	c.	4	d.	18	e.	23	f.	4
AMC	a.	51	b.	118	c.	20	d.	54	e.	115	f.	14
MATS	a.	5	b.	12	c.	5	d.	3	e.	17	f.	4
ARDC	a.	18	b.	49	c.	7	d.	19	e.	48	f.	6

10. Do you assign OBJECTIVES to your subordinate organizations?

GRAND TOTAL	627 Yes	49 No
ADC	42	8
SAC	110	8
ATRC	111	2
TAC	49	6
AMC	211	11
MATS	29	2
ARDC	75	12

11. Are those OBJECTIVES assigned to your subordinate organizations

G T	a.	( 25)	All GENERAL OBJECTIVES?
R O	b.	( 41)	All SPECIFIC OBJECTIVES?
A T	c.	(110)	Mostly GENERAL?
N A	d.	(209)	Mostly SPECIFIC?
D L	e.	(210)	About half GENERAL and half SPECIFIC?

ADC	a.	2	b.	3	c.	10	d.	15	e.	17
SAC	a.	1	b.	7	c.	5	d.	59	e.	40
ATRC	a.	2	b.	8	c.	28	d.	37	e.	37
TAC	a.	3	b.	3	c.	9	d.	19	e.	16
AMC	a.	14	b.	15	c.	37	d.	57	e.	81
MATS	a.	0	b.	2	c.	9	d.	5	e.	13
ARDC	a.	4	b.	6	c.	14	d.	26	e.	26

12. Do you use:

G T a. (309) all of

R O b. (308) part of

A T c. (13) none of

N A these OBJECTIVES in measuring the progress of your subordinate organiza-  
D L tions?

ADC	a. 15	b. 29	c. 0
SAC	a. 65	b. 49	c. 0
ATRC	a. 57	b. 48	c. 1
TAC	a. 24	b. 25	c. 1
AMC	a. 103	b. 100	c. 6
MATS	a. 12	b. 15	c. 1
ARDC	a. 33	b. 42	c. 4

### SECTION III

#### PART 3

#### GENERAL

1. Do you have a SINGLE DOCUMENT written for the specific purpose of informing you of the OBJECTIVES of your next higher organization?

GRAND TOTAL	394 Yes	328 No
ADC	21	30
SAC	70	55
ATRC	62	60
TAC	26	31
AMC	147	94
MATS	16	14
ARDC	52	44

2. Do you believe that the document referred to in No.1 above is:

G T a. (189) Vitally necessary to your organization?

R O b. (395) Helpful to your organization?

A T c. (43) Not needed at all?

N A

D L

ADC	a. 9	b. 30	c. 0
SAC	a. 31	b. 66	c. 11
ATRC	a. 31	b. 67	c. 4
TAC	a. 23	b. 26	c. 1
AMC	a. 66	b. 137	c. 13
MATS	a. 8	b. 13	c. 15
ARDC	a. 21	b. 56	c. 9

3. If the answer to No. 1 above is "No", do you know what the OBJECTIVES of your next higher organization are?

GRAND TOTAL	327 Yes	32 No
ADC	31	2
SAC	60	3
ATRC	59	7
TAC	19	11
AMC	100	8
MATS	15	1
ARDC	43	4

4. Do you believe that it is:

Q T a. (352) Vitally necessary to your organization?  
 R O b. (327) Helpful to your organization?  
 A T c. (11) Not needed at all?  
 N A for you to know the OBJECTIVES of your next higher organization.  
 D L

ADC	a. 22	b. 26	c. 1
SAC	a. 59	b. 54	c. 3
ATRC	a. 66	b. 51	c. 0
TAC	a. 29	b. 23	c. 3
AMC	a. 122	b. 107	c. 1
MATS	a. 12	b. 16	c. 1
ARDC	a. 42	b. 50	c. 2

5. Do you believe that a written statement of the OBJECTIVES of your organization is:

G T a. (366) Vitally necessary to your organization?  
 R O b. (340) Helpful to your organization?  
 A T c. (21) Not needed at all?  
 N A for managing your operations.  
 D L

ADC	a. 17	b. 34	c. 0
SAC	a. 79	b. 42	c. 5
ATRC	a. 65	b. 54	c. 2
TAC	a. 23	b. 32	c. 3
AMC	a. 132	b. 106	c. 5
MATS	a. 14	b. 16	c. 1
ARDC	a. 30	b. 55	c. 5

6. Do you believe that all organizations should give a written statement of OBJECTIVES to their subordinate organization?

G T 661 Yes 58 No  
 R O a. (62) Should these be SPECIFIC?  
 A T b. (100) Should they be GENERAL?  
 N A c. (499) Both?  
 D L

6. (cont)

ADC		46 Yes		4 No	
a.	6	b.	9	c.	31
SAC		116 Yes		10 No	
a.	21	b.	14	c.	82
ATRC		107 Yes		11 No	
a.	4	b.	20	c.	85
TAC		50 Yes		No	6
a.	6	b.	5	c.	39
AMC		228 Yes		13 No	
a.	19	b.	34	c.	175
MATS		28 Yes		3 No	
a.	0	b.	1	c.	26
ARDC		86 Yes		11 No	
a.	8	b.	17	c.	61

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NOT REPRODUCIBLE